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MEDLARS TRAINING PROGRAM

Indexing Training Syllabus

NATIONAL LIBRARY OF MEDICINE
Bibliographic Services Division
Index Section
1969

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MEDLARS TRAINING PROGRAM

INDEXING TRAINING SYLLABUS

by

Thelma Charen

NATIONAL LIBRARY OF MEDICINE
Index Section BSD
1969

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National Library of Medicine
Bethesda, Md.

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PREFACE

This syllabus is meant to supplement the Indexing Training Lectures of the MEDLARS Analyst Training Program.

It is not designed as a substitute for either the lectures or for the Indexing Manual.

This syllabus is intended primarily as a workbook for the use of MEDLARS Analysts training in the Index Section at the National Library of Medicine.

INDEX MEDICUS

Training Course

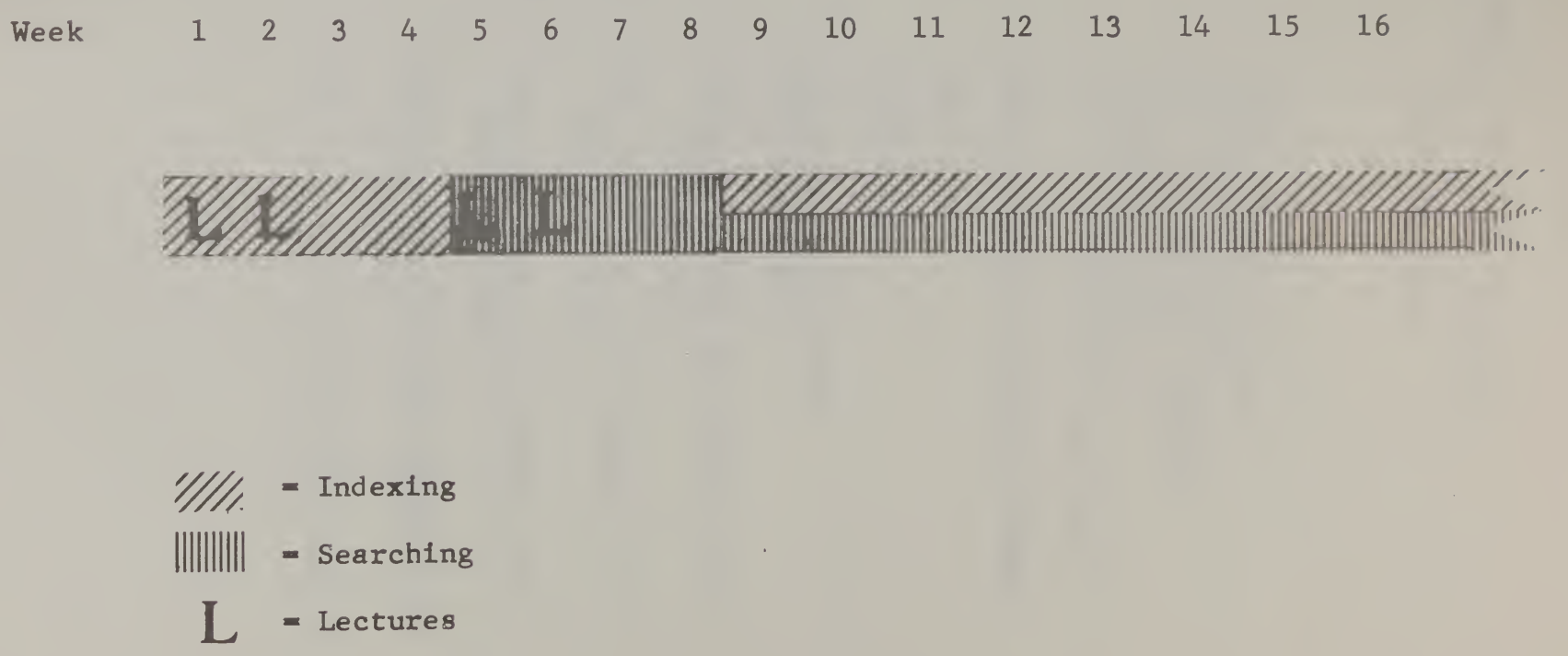
READING ASSIGNMENTS

The three reading assignments are the Indexing Manual, Technical Notes and Technical Supplements. They are compulsory and should be completed within the first five weeks of your stay in Index Section. Specific work assignments for class and for indexing, however, take precedence over the reading assignments.

When you begin indexing, please devote at least an hour a day to the reading of the Indexing Manual. It will be recorded on your daily statistical sheet as MANUAL, with the number of hours spent on reading it on the given date. This must be so credited as not to confuse actual indexing statistics.

Do not attempt to memorize rules at this reading of either the manual or the technical bulletins. Both were designed as reference tools. Many of the rules and examples in the manual are repetitive and will be committed to memory easily through use and familiarity. Do not memorize the instructions at this time: merely read to familiarize yourself with their general scope and coverage.

MEDLARS TRAINING SCHEDULE



MEDLARS Training Schedule

Index Section

Lecture I	INDEX MEDICUS history Indexing workflow List of Journals Indexed Authority lists IM and NIM rationale Depth and Non-Depth rationale
Lecture II	Medical Subject Headings (MeSH)
Lecture III	Data Form
Lecture IV	Subheadings
Lecture V	References and tools Indexing Manual
Lecture VI	Indexing policy by category and subject field
Lecture VII	Indexing policy by category and subject field
Lecture VIII	Indexing policy by category and subject field
Lecture IX	Demonstration of the indexing of an article
Lecture X	Philosophy of the indexing operation

INTRODUCTION

I. MEDLARS: definition, purpose and scope (See MEDLARS 1963-1967)

II. Brief history of the National Library of Medicine

III. Definition and scope of INDEX MEDICUS and CUMULATED INDEX MEDICUS

IV. Brief history of their origins (See Chronology, p. 2)

- Index-Catalogue
- Current List of Medical Literature (CLML)
- AMA's Quarterly Cumulative Index Medicus (QCIM)
- Index Medicus (IM)
- Cumulated Index Medicus (CIM)

V. Derivative publications of INDEX MEDICUS (See p. 5)

VI. Indexing: definition

VII. Types of indexing: (See pp. 6-7)

- by professional indexers
- by publishers
- by authors

VIII. Limitations of MEDLARS (See p. 8)

CHRONOLOGY

Names

1865 Army Medical Library
1952 Armed Forces Medical Library
1956 National Library of Medicine

Publications

1865 Army Medical Library founded by Col. John Shaw Billings

1876 Specimen Fasciculus of the Index-Catalogue published

1879 Index Medicus (a monthly publication), volume 1, published

1880 Index-Catalogue of the Library of the Surgeon General's Office, United States Army, (an annual publication), volume 1, published

1916 Quarterly Cumulative Index to Current Literature published by the American Medical Association

1927 Index Medicus combines with QCI to form Quarterly Cumulative Index Medicus; published by the American Medical Association

1941 Current List of Medical Literature published as a weekly by the Friends of the Army Medical Library

1942 CLML published jointly by the Friends and the Medical Library Association

1945 CLML published by the Army Medical Library

1950 CLML becomes a monthly

1955 Index-Catalogue ceases publication with the Mh-Mn volume in the middle of the 4th series (see below 1959)

1956 QCIM ceases publication

1959	Index-Catalogue 5th series published listing monographs only, to complete entries from Mo through Z remaining after cessation as above (1955)
1960	CLML becomes Index Medicus, a monthly publication of NLM
1961-1964	Cumulated Index Medicus published by AMA as annual cumulations
1965-present	Cumulated Index Medicus published by NLM as annual cumulation

Authority Lists

CLML:	1941-1949	ad lib or Index-Catalogue usage
	1950-1953	QCIM's authority list
	1954-1959	SHAL: the Library's Subject Heading Authority List
Index Medicus:	1960-1962	MeSH: Medical Subject Headings, 1st ed.
MEDLARS:	1963	MeSH 2d ed.
	1964	MeSH 3d ed.
	1965	MeSH
	1966	MeSH
	1967	MeSH
	1968	MeSH

Subheadings

1950-1959	CLML	Subheadings
1960-1962	Index Medicus	Subheadings
1963-1965	MEDLARS	No Subheadings
1966-	MEDLARS	Subheadings

Production

CLML:	1950-1959	3x5 cards hand typed on IBM executive typewriters and hand-pasted onto mounting boards; reduced to standard size by photo-offset

Index Medicus:	1960-1962	IBM cards typed on Friden Justowriters; photographed by Listomatic camera
MEDLARS:	1963-	Friden Justowriters; punched paper tape; produced by high-speed printer GRaphic Arts Composing Equipment (GRACE)

Index-Catalogue

1st series	1880-1895	16 vol	Monographs & periodicals
2d series	1896-1916	21 vol	Monographs & periodicals
3d series	1918-1932	10 vol	Monographs & periodicals
4th series	1936-1948 (M-Mez) 1955 (Mh-Mn)	11 vol	Monographs & periodicals
5th series	1959 (Authors & Titles) 1961 (Subjects A-M) 1961 (Subjects N-Z)	3 vol	Monographs only

Index Medicus:	1960-1962	IBM cards typed on Friden Justowriters; photographed by Listomatic camera
MEDLARS:	1963-	Friden Justowriters; punched paper tape; produced by high-speed printer GRaphic Arts Composing Equipment (GRACE)

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NATIONAL LIBRARY OF MEDICINE RECURRING BIBLIOGRAPHIES

The National Library of Medicine, through its computer-based MEDLARS (Medical Literature Analysis and Retrieval System), periodically produces lists of citations to journal articles in specialized biomedical fields. Most of these lists, termed "Recurring Bibliographies," are printed and distributed by nonprofit professional organizations and other government agencies with whom the Library cooperates.

(1) The *Bibliography on Medical Education* is published monthly in the *Journal of Medical Education* ($15). Cumulations for 1964–65, 1966, and 1967 are available from the American Association of Medical Colleges, 2350 Ridge Avenue, Evanston, Illinois 60201, for $2.00 each.

(2) The quarterly *Cerebrovascular Bibliography* is available on request from the Executive Secretary, Joint Council Subcommittee on Cerebrovascular Disease, National Institute of Neurological Diseases and Blindness, National Institutes of Health, Bethesda, Maryland 20014.

(3) The monthly bibliography, *Fibrinolysis, Thrombolysis, and Blood Clotting*, is available on request from Dr. James M. Stengle, Committee on Thrombolytic Agents, National Heart Institute, National Institutes of Health, Bethesda, Maryland 20014. Annual cumulations for 1966 and 1967 are available.

(4) The monthly *Index of Rheumatology* is available from the American Rheumatism Association, 1212 Avenue of the Americas, New York, New York 10036. Price: $6 per year.

(5) The quarterly *Index to Dental Literature* is sold by the American Dental Association, 211 East Chicago Street, Chicago, Illinois 60611. Price: $20 for four issues, $10 annual cumulation alone.

(6) The *International Nursing Index* is sold by the American Journal of Nursing Company, 10 Columbus Circle, New York, New York 10019. Price: $15 for four quarterly issues; $12.50 for annual cumulations.

(7) The quarterly *Artificial Kidney Bibliography* is made available, without cost, to National Institute of Health grantees, to contractors in the Institute's Artificial Kidney Program, and, upon request, to other qualified interested investigators and practitioners working in areas closely related to the artificial kidney. Address requests to the Scientific Communications Officer, National Institute of Arthritis and Metabolic Diseases, National Institutes of Health, Bethesda, Maryland 20014.

(8) The bimonthly *Endocrinology Index* is published by the National Institute of Arthritis and Metabolic Diseases. For information write to the Scientific Communications Officer, National Institute of Arthritis and Metabolic Diseases, National Institutes of Health, Bethesda, Maryland 20014.

(9) The *Bibliography of Surgery of the Hand*, a quarterly, is published and distributed by the American Society for Surgery of the Hand. For information write to John P. Adams, M.D., Chairman, American Society for Surgery of the Hand, 2520 L Street, N.W., Washington, D.C. 20037.

(10) The *Anesthesiology Bibliography*, a bimonthly, is published and distributed by the American Society of Anesthesiologists. For information write: Wood Library, Museum of Anesthesiology, American Society of Anesthesiologists, 515 Busse Highway, Park Ridge, Illinois 60068.

(11) The quarterly *Toxicity Bibliography* is published by the National Library of Medicine and distributed by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Price: $9.00 per year ($11.25 foreign); single issues, $2.25.

(12) The *Current Bibliography of Epidemiology* (CuBE), a monthly, is published by the American Public Health Association. Price $35.00 for 12 monthly issues and annual cumulation. To subscribe or to obtain further information write: Editor: CuBE, American Public Health Association, 1740 Broadway, New York, New York 10019.

(13) The *Neurosurgical Biblio-Index*, a quarterly, is published by the American Association of Neurological Surgeons. For information write: Editor, *Journal of Neurosurgery*, Dartmouth, Hanover, New Hampshire 03755.

Kinetics of intestinal active transport of five neutral amino acids

D. M. MATTHEWS[1] AND LEONARD LASTER
Gastroenterology Unit, National Institute of Arthritis and M
Diseases, National Institutes of Health, Bethesda, Maryland

MATTHEWS, D. M., AND LEONARD LASTER. *Kinetics of intestinal active transport of five neutral amino acids.* Am. J. Physiol. 208(4): 593-600. 1965.—Rates of transport against a concentration gradient by everted segments of hamster small intestine were determined for five monoaminomonocarboxylic acids. Values varied considerably from animal to animal. A graph of reciprocal of transport rate as a function of reciprocal of initial amino acid concentration revealed a linear relationship for each amino acid. Values for K_t, the concentration at which half-maximal transport is observed, diminished with increasing length of side chain for glycine, L-alanine, L-valine, and L-leucine. The K_t for α-aminoisobutyric acid was much higher than the others. Values for V_{max}, the apparent limiting transport rate, decreased as chain length increased. With increasing initial amino acid concentration transport rate rose to a maximum and then declined. At concentrations producing this decline no gross mucosal damage was noted. The apparent inhibitory effect of these high concentrations was not a permanent one.

intestinal absorption small intestine hamster
water transport glycine L-alanine L-leucine
L-valine α-aminoisobutyric acid

KRATZER (14) AND WISEMAN (33, 34) could find no definite relationship between the rates of intestinal transport of amino acids and their chemical structure, but Finch and Hird (8, 9), studying uptake by the intestinal wall, found that the rate of uptake of monoaminomonocarboxylic amino acids was related to the length of the side chain, and as a result it has been suggested that the affinity of these amino acids for the intestinal transport mechanism is determined by the lipophilic properties of this chain (9, 16, 29). This paper describes a reinvestigation of the problem in which the kinetics of intesti transport against a concentration gradient of a se monoaminomonocarboxylic amino acids wa

d for publication 23 July 1964
was done wh

using everted segments of hamster small inte shown that for each of the amino acids studi crease in the initial concentration results in a i of transport until a limiting rate is attained, t tude of this limiting rate, and the concentratio acid required to achieve it, varying with the amino acid. The results support the hypot transport characteristics are related to the properties of the side chain, and suggest reas failure to demonstrate this relationship in work. In addition, data were obtained on th bility of transport measurements, the site intestinal transport of the amino acids, and tion of amino acid transport to water tr main technique used was that of Crane an which permits repeated sampling of the inside the intestinal segment. This enables o transport during a period when the con amino acid in the serosal fluid is increasing rate. The technique also permits changing o and serosal fluids so that conditions can be ing the course of an experiment with an intestinal segment. This was a considerable ad a companion study on the relationship betwee structure and competition for transport (19).

METHODS AND MATERIALS

Transport studies. Male golden hamsters, fed ad weighing between 70 and 120 g, were killed on the head and the small intestine muco several times in situ with warm Krebs-R saline. The intestine was stripped aw tery and everted. A segment, abo

American Journal
of Physiology
April 1965

AUTHOR INDEXING

The following journals give key words or author's suggestions for indexing terms:

American Journal of Applied Physiology

American Journal of Physiology

Calcified Tissue Research

Circulation

Circulation Research

European Journal of Pharmacology

Experimental Parasitology

Japanese Heart Journal

Journal of Lipid Research

Journal of Pharmaceutical Sciences

Pediatric Research

Psychophysiology

Scandinavian Journal of Clinical & Laboratory Investigation

Scandinavian Journal of Gastroenterology ✠

Survey of Ophthalmology

✠ Requires MeSH terms

MEDLARS Limitations in Literature Analysis

The following concepts are at present not able to be indexed or retrieved with precision in MEDLARS:

1. any degree or quality or quantity
2. relationships not expressed by coordinations of two or more main headings, by a main heading with a subheading, by a main heading with a check tag
3. degrees of adverse effects
4. degrees of beneficial effects
5. more or less
6. before or after or how far along
7. early or late
8. often, recurrent or seldom
9. primary or secondary
10. major or minor
11. above or below
12. surgical approach
13. partial or total
14. dosage or amount

BIBLIOGRAPHIC SERVICES DIVISION

Organization

A motion picture, lantern-slide lecture and tour of the National Library of Medicine will give an over-all view of the Library, its divisions and functions. These will be scheduled at the convenience of the class on various afternoons during the two-week indexing training period.

I. Administrative organization of Bibliographic Services Division (See p. 10)

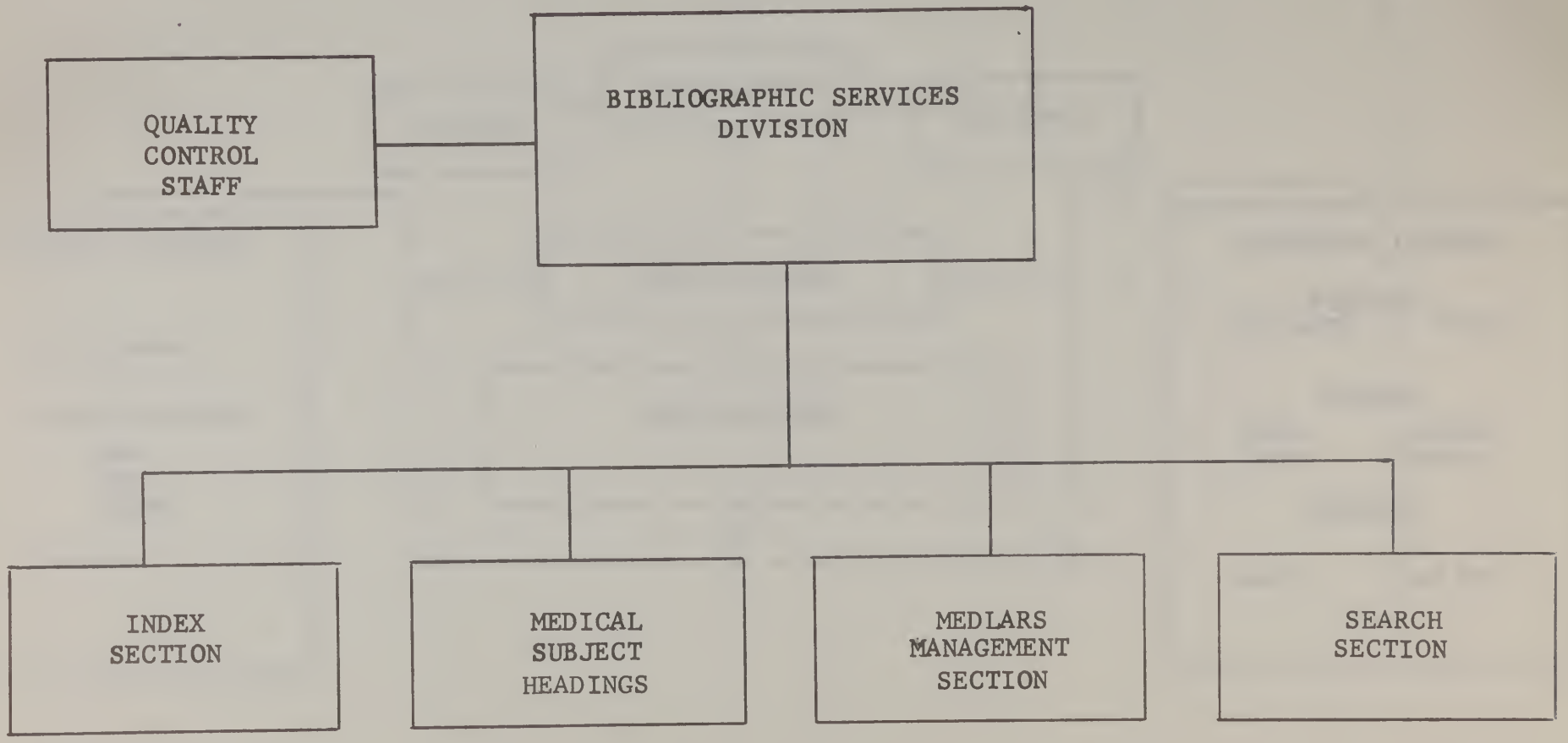
II. Work flow in BSD Index Section (See p.11)

III. Personnel of BSD and their activities

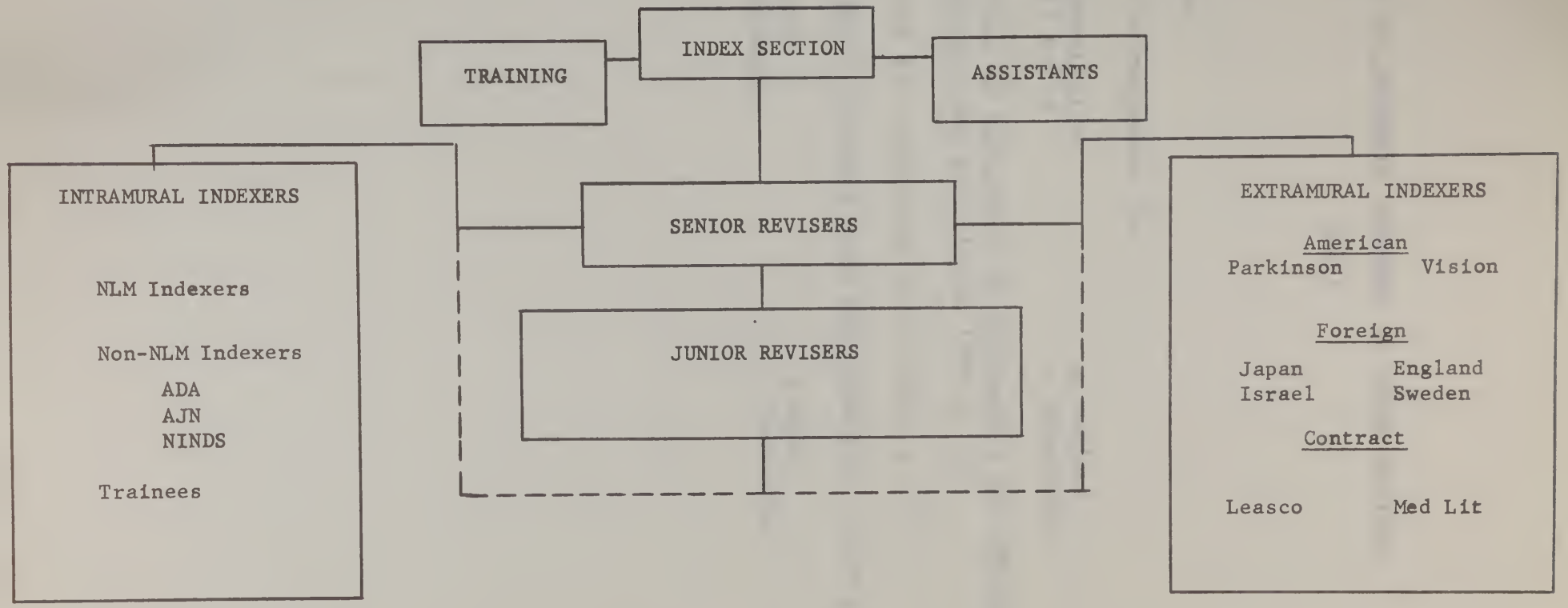
IV. Personnel of Index Section and their activities

BSD REORGANIZATION EFFECTIVE JULY 15, 1968

(Per AD-LO memo of July 17, 1968)



Administrative Organization


INDEX SECTION
TRAINING
ASSISTANTS
INTRAMURAL INDEXERS
NLM Indexers
Non-NLM Indexers
ADA
AJN
NINDS
Trainees
SENIOR REVISERS
JUNIOR REVISERS
EXTRAMURAL INDEXERS
American
Parkinson
Vision
Foreign
Japan
England
Israel
Sweden
Contract
Leasco
Med Lit

W O R K F L O W

LIST OF JOURNALS INDEXED IN INDEX MEDICUS

(LJI)

I. Purpose

II. Parts: arrangement by

- ▵ abbreviation
- ▵ full title
- ▵ subject
- ▵ geography

III. Committee on Selection of Literature for MEDLARS: function and activities (See p. 13)

IV. Criteria for inclusion in LJI (See p. 14)

V. Indexing directions from the Committee: (See p. 15)

- ▵ Depth
- ▵ Non-Depth
- ▵ Rush
- ▵ Selective

LIST OF JOURNALS INDEXED IN INDEX MEDICUS

Committee on Selection of Literature for MEDLARS

As of Spring 1969

Dr. William B. Bean - Editor, Archives of Internal Medicine, Chairman

Mr. William K. Beatty - Librarian, Northwestern University Medical School

Mr. Harold Bloomquist - Librarian, Francis A. Countway Library of Medicine

Dr. Morris Fishbein - Editor, Medical World News

Dr. Franz J. Ingelfinger - Editor, New England Journal of Medicine

Dr. John H. Talbott - Editor, Journal of the American Medical Association

Miss Myrl E. Ebert - Librarian, Division of Health Affairs, University of North Carolina

List of Journals Indexed in

Index Medicus

INTRODUCTION

To aid in the selection of journals for *Index Medicus*, the National Library of Medicine established an advisory group in September 1964 known as the Ad Hoc Panel on Selection of Journals for *Index Medicus*. Using a number of criteria, and assisted by advice solicited from knowledgeable physicians, scientists, and medical librarians outside the library, this Panel has, since its initial meeting, recommended the deletion of 308 titles and the addition of 349 new titles. Among the criteria used for selection of titles were:

(1) Sponsorship of the journal by a professional organization of recognized status in a given discipline or subject area.

(2) Sponsorship by a national academy or a national institute.

(3) Existence of an active editorial board consisting of knowledgeable and critical referees with high professional standing.

(4) Regular contributions to a journal by leaders in the subjects to which the journal is addressed.

(5) Strict adherence to an established format in presentation of methodology, tables, graphs, references, and other data.

(6) Publication policy that prohibits promotional, parochial, or secular approaches in the journal.

Those familiar with *List of Journals Indexed* will notice the absence of the "r" designation, which was used to indicate titles not regularly indexed but scanned exclusively for review articles. In April 1965 the Library, on advice from the Panel, discontinued this practice; review articles are now selected only from titles regularly indexed in *Index Medicus*.

In keeping with a statement made in the January 1965 *Index Medicus* the Library no longer includes in *List of Journals Indexed* the titles of journals not actually indexed. This is another action of the Library which reflects a recommendation of the Panel on Selection.

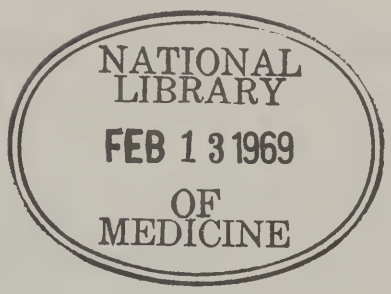
The Library recognizes that choices, even with the best advice available, will not satisfy those journal editors and publishers whose titles are not included. Although it is the desire of the Library to index all of these journals, limitations of personnel and physical resources make it impossible at this time.

National Library of Medicine
Bethesda, Maryland 20014
January 1966

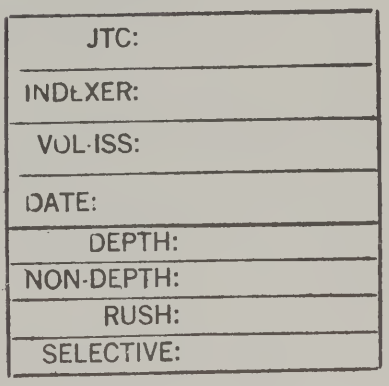
Reprint from the 1966 LJI
giving criteria for
inclusion in
INDEX MEDICUS

SAMPLE NLM JOURNAL STAMPS

Standard Stamp



INDEX MEDICUS Stamp



AUTHORITY LISTS

I. Definition and purpose of an authority list

II. Synonyms: thesaurus, controlled vocabulary, standardized vocabulary

III. History of authority lists at the National Library of Medicine (see p.

- ▵ QCIM
- ▵ SHAL
- ▵ MeSH 1960
- ▵ MeSH 1961-present

Because of the importance of MEDICAL SUBJECT HEADINGS (MeSH), an entire lecture will be devoted to its analysis in detail.

IV. Common features:

- ▵ Typography
- ▵ Main headings
- ▵ Cross-References
- ▵ Subheadings

BORDET-WASSERMANN REACTION: See Wassermann Reaction

BORNA DISEASE

BORNEOL

BORON COMPOUNDS*

BOTALLO'S DUCT: See Ductus Arteriosus

BOTANY

history

BOTHRIOCEPHALUS: See Tapeworm; Tapeworm Infection

BOTRYOMYCES

BOTRYOMYCOSIS HOMINIS: See Granuloma pyogenicum

BOTULISM*

antiserum

clostridium

toxin

toxoid

BOUGIES

BOUILLAUD'S DISEASE: See Rheumatic Fever

BOWEN'S DISEASE: See Cancer, precancerous conditions

BOY SCOUTS

BRACHIAL PLEXUS*
See also Neuralgia, brachial; Paralysis, brachial

BRADYCARDIA: See Heart, rate

BRAIN*
See also Cerebellum; Corpus Callosum; Corpus Striatum; Dura Mater; Hypothalamus; Lenticular Nucleus; Medulla Oblongata; Meninges; Nervous System; Pons Varolii; Thalamus; etc.

abnormalities: See also Macrocephaly; Microcephaly

anemia

atrophy

blood supply: See also Aneurysm, cerebral; Arteries, cerebral; Arteriosclerosis, cerebral; Hemoencephalic Barrier; Thrombosis, cerebral; etc.

calcification

chemistry

compression: See also Cerebrospinal Fluid, pressure; Cranium, pressure in

concussion: See Brain, wounds and injuries

* Use standard subheads on page 3

EUSTACHIAN TUBE
x AUDITORY TUBE

EUSTRONGYLUS GIGAS see DIOCTOPHYMATOIDEA

EUTHANASIA
x MERCY KILLING

EVOLUTION

EWING SARCOMA see SARCOMA, EWING'S

EWING TUMOR see SARCOMA, EWING'S

EXANTHEMA SUBITUM
x ROSEOLA INFANTUM

EXERCISE
see also ATHLETICS
xx ATHLETICS

EXERCISE THERAPY
xx PHYSICAL THERAPY

EXHIBITS
xx ART, MEDICAL

EXODONTIA see TEETH EXTRACTION

EXOPETHALMIC GOITER see HYPERTHYROIDISM

EXOPHTHALMOS

EXOSTOSES
see also OSTEOMA
xx OSTEOMA

EXOSTOSES, MULTIPLE
x MULTIPLE EXOSTOSIS

EXPECTORANTS
see also AMMONIUM CHLORIDE
see also IODIDES
see also IPECAC
x TERPIN HYDRATE

EXPEDITIONS

EXPLOSIONS
xx DISASTERS

EXTRACELLULAR FLUIDS see BODY FLUIDS

EXTRAPYRAMIDAL TRACTS

EXTREMITIES
see also ARM
see also LEG

see also OCCUPATIONAL THERAPY

X GYMNASTICS, MEDICAL
XX PHYSICAL THERAPY

EXERTION

see also FATIGUE

X EFFORT
X EXERCISE
X PHYSICAL EFFORT
X WORK

EXHIBITS

XX MEDICAL ILLUSTRATION

EXISTENTIALISM

XX PHILOSOPHY
XX PSYCHOLOGY

Exodontia see TEETH EXTRACTION

Exophthalmic Goiter see HYPERTHYROIDISM

EXOPHTHALMOS

XX OPHTHALMOLOGY

EXOSTOSES

see also OSTEOMA

XX OSTEOMA

EXPECTORANTS

see also AMMONIUM CHLORIDE

see also IODIDES

see also IPECAC

X TERPIN HYDRATE
XX COUGH - therapy

EXPEDITIONS

X VOYAGES
XX TRAVEL

EXPLOSIONS

see also BLAST INJURY

XX DISASTERS

Extracellular Fluid see BODY FLUIDS

EXTRAPYRAMIDAL TRACTS

Extrasensory Perception see PARAPSYCHOLOGY

EXTREMITIES

see also ARM

see also LEG

X LIMBS

Extremities, Artificial see ARTIFICIAL LIMBS

EXUDATES AND TRANSUDATES

see also EDEMA

X TRANSUDATES
XX EDEMA

EYE

IM AND NIM RATIONALE

I. Synonyms

IM: INDEX MEDICUS
Print

NIM: NON-INDEX MEDICUS
Store

II. Definitions

IM: a term destined to be printed in the published INDEX MEDICUS

NIM: a term destined for computer storage only

III. Availability: both IM and NIM entries are stored in the computer and are available for machine retrieval

IV. Application

IM: represents the basic points of the article indexed

NIM: represents subjects discussed in the article but not necessarily the point of the article

represents broad aspects of specific subjects acting as search parameters

V. Philosophical orientation in the indexing of medical literature

Primary orientation:

- ▵ organ
- ▵ disease
- ▵ cause
- ▵ treatment
- ▵ technic of diagnosis or treatment

Secondary orientation: any premise leading to the understanding of disease and how to prevent or treat it

- ▵ organ function
- ▵ physiological process
- ▵ metabolism
- ▵ organisms
- ▵ chemicals
- ▵ drugs
- ▵ paramedical facets

VI. Parameters usually IM

- ▵ the point of the article
- ▵ organs
- ▵ diseases
- ▵ organisms
- ▵ chemicals
- ▵ therapies

VII. Parameters usually NIM

- ▵ data not the point of the article
- ▵ technics
- ▵ age of subjects
- ▵ sex of subjects
- ▵ animals studied experimentally

See p. 22

See Indexing Manual, Section 4: INDEX MEDICUS HEADINGS AND NON-INDEX MEDICUS HEADINGS; Section 13: CHOICE OF HEADINGS IN INDEXING; et passim

PRINT (IM)	STORE (NIM)
1. The point of the article	1. Anything else important to research
2. Organs, diseases, causes, therapies, substances, physiological processes	2. Technics
3. Normal PREGNANCY or PREGNANCY COMPL. if the point of the article	3. PREGNANCY when you IM PREGNANCY COMPL. or a pregnancy-related concept
4. Normal INFANT, NEWBORN or INFANT, NEWBORN, DISEASES if the point of the article	4. INFANT, NEWBORN when you IM INFANT, NEWBORN, DISEASES or one of its indentions
5. Veterinary animals	5. Experimental animals
6. Pre-coordinated animal/disease heading	6. Animal if on Data Form
7. Organ, disease, physiological process, therapy in various age groups	7. Age groups (rare exceptions)
8. The subject itself	8. A qualifier of the subject
X SMOKING -STATISTICS (NIM)	
X PENICILLIN -CHEMISTRY (NIM)	
X ILEUM --INTESTINAL DISEASES (NIM)	
9. Organ/Neoplasms heading and histological type	
10. History of Medicine Century only if the point of the article	10. Century if not the point of the article
11. MAIN HEADING *subheading	11. the same MAIN HEADING with other subheadings (rare exceptions)
	12. General pathological processes in C17; see Manual 16.15

DEPTH AND NON-DEPTH RATIONALE

I. Degree of depth of indexing as determined by the Committee on Selection of Literature for MEDLARS

II. Definition of Depth as an unlimited number of headings to describe the article fully and adequately

III. Definition of Non-Depth as the number of headings necessary to describe fully and adequately THE POINT OF THE ARTICLE

IV. Expected number of heading for Depth; for Non-Depth

V. Relation of Depth and Non-Depth to the headings printed in INDEX MEDICUS and to those stored in the computer

See Indexing Manual, Section 3: DEPTH INDEXING

EXERCISE I

INDEX MEDICUS

Current
Monthly
Copy

Please remove from the Index Section's reference shelves a copy of the INDEX MEDICUS monthly issues. Examine a recent issue, noting the following items.

Subject Section

1. Form of entry
2. Alphabetization of entries
3. Typography
4. English titles vs foreign titles
5. Role of the journal title abbreviation
6. Language symbol
7. Position of author
8. Number of authors
9. Accents and diacriticals

Name Section

1. Name as author
2. Name as biographee
3. Number of authors
4. Treatment of co-authors
5. Vernacular titles
6. Accents and diacriticals
7. Anonymous works

Other Sections

1. Inside cover
2. Introduction
3. LJI supplement
4. MEDLARS Literature Searches
5. Bibliography of Medical Reviews
6. Other

EXERCISE II

INDEX MEDICUS

1. Which section of INDEX MEDICUS is blue and which white?

2. How many authors are given in citations in the subject section?

3. How many authors are given in citations in the name section?

4. Do accent marks appear in the subject section?

5. Do translations appear in the name section?

6. Are there any cross-references in the subject section?

7. Are there any cross-references in the name section?

8. How are the citations arranged in the subject section under a given subject?

9. What is the fewest number of citations for an article by A. Fairchild on Freud's contribution to the discovery of cocaine?

10. Can anonymous articles written in English be found in INDEX MEDICUS? Where?

MEDICAL SUBJECT HEADINGS
(MeSH)

I. History (see Chronology, p. 3)

II. Definition and purpose

III. Creation and content

IV. Sections

- introductory matter
- alphabetical list
- categorized lists

V. Alphabetical List

- typography
- categories in parentheses
- classes of headings
  - main headings
  - cross-references (8 types) (see p. 28)
  - provisional headings
  - geographic headings (Z1)
- relation to categorized lists
- how to use

VI. Categorized Lists

- organization (14 categories)
- margin and indention relationships
- relation to alphabetized list
- names and content of categories
- subcategories

VII. Scope and coverage (see p. 27)

VIII. Trees (see p. 29)

- organization
- purpose
- relation to MeSH

IX. Hedges (see p. 31)

MEDICAL SUBJECT HEADINGS (MeSH): General Characteristics

Coverage

1. Organs, tissues, cells, regions
2. Diseases
3. Drugs, chemicals, endogenous and other substances
4. Living organisms: microorganisms, higher animals, plants
5. Procedures: diagnostic, therapeutic, surgical, anesthetic, analytic
6. Physiological processes
7. -OLOGIES and other fields and disciplines
8. Miscellaneous medical and paramedical concepts
9. Geography
10. Provisional Headings

Form

1. Anglo-Saxon for organs; Latin or Greek in the absence of the Anglo-Saxon and for adjectival forms (BRAIN vs CEREBRAL; KIDNEY vs RENAL or NEPHR-)
2. Singular or plural form
3. Alphabetization: seek above or below the needed term
4. Inversions to bring like concepts together
5. Interchangeable compounds as entries (autoradiography vs radioautography; photomicrography vs microphotography)
6. Plural vs singular drugs
7. Compound drug names (di/hydr/oxy/quinoline)
8. Pre-coordinated headings
9. Specialties vs organs or diseases
10. Hyphenations for syndromes
11. Hyphenations for standard orthography (self help vs self-help devices)
12. Apostrophe s or s apostrophe for eponyms; for syndromes
13. Abbreviated headings: optional (See pp. 32-3)
14. Abbreviated headings: mandatory
15. Accents

Cross-References

Directional References

1. See (informally S)
2. See under (informally SU)
3. See also related (informally SR or SAR)
4. See also specific (informally SS or SAS)

Corresponding Reverse References

1'. See from (officially X)

2'. See under from (officially XU)

3'. See also related from (officially XR)

4'. See also specific from (officially XS)

INJURY, IMMUNE DISEASE, POISONING (NON MESH) (CONTINUED)			
WOUNDS AND INJURIES (CONTINUED)			
FRACTURES (CONTINUED)			
TOOTH FRACTURES	C14.88.30.1	C4.66.54.1	
FROSTBITE	C14.88.32.		
IMMERSION FOOT	C14.88.32.1	C17.25.24.1	
TRENCH FOOT	C14.88.32.1	C17.25.24.1	
HAND INJURIES	C14.88.34.		
FINGER INJURIES	C14.88.34.1		
HEAD INJURIES	C14.88.36.		
BRAIN INJURY, ACUTE	C14.88.36.1	C14.88.16.	
CEREBROSPINAL OTORRHEA	C14.88.36.1	C11.26.9.	
CEREBROSPINAL RHINORRHEA	C14.88.36.1	C5.33.33.1	
PNEUMOCEPHALUS	C14.88.36.1		
HEART INJURIES	C14.88.38.	C14.88.58.1	
HEAT EXHAUSTION	C14.88.39.		
SUNSTROKE	C14.88.39.1		
LEG INJURIES	C14.88.40.		
KNEE INJURIES	C14.88.40.1		
MAXILLOFACIAL INJURIES	C14.88.41.		
FACIAL INJURIES	C14.88.41.1		
MANDIBULAR INJURIES	C14.88.41.1		
MOTION SICKNESS	C14.88.42.	C11.26.36.1	
NEUROSES, POST-TRAUMATIC	C14.88.43.	F.34.44.1	
PERIPHERAL NERVE INJURIES	C14.88.44.		
RADIATION INJURY	C14.88.45.		
LEUKEMIA, RADIATION-INDUCED	C14.88.45.1	C2.10.49.	C2.54.32.
NEOPLASMS, RADIATION-INDUCED	C14.88.45.1	C2.54.	
*OSTEORADIONECROSIS	C14.88.45.1		
RADIATION INJURY, EXPERIMENTAL	C14.88.45.1		
RADIODERMATITIS	C14.88.45.1	C12.75.	
RUPTURE	C14.88.46.		
SPLENIC RUPTURE	C14.88.46.1	C9.91.40.	C14.88.2.1
STOMACH RUPTURE	C14.88.46.1	C4.95.49.	C14.88.2.1
UTERINE RUPTURE	C14.88.46.1	C6.42.55.	C6.60.60.
SELF MUTILATION	C14.88.48.	F.10.43.	
SHOCK, TRAUMATIC	C14.88.50.	C17.88.52.1	
SPINAL CORD INJURIES	C14.88.52.		
SPINAL CORD COMPRESSION	C14.88.52.1	C10.99.42.	
SPINAL INJURIES	C14.88.53.		
WHIPLASH INJURY	C14.88.53.1		
SPRAINS AND STAINS	C14.88.54.		
TENDON INJURY	C14.88.56.		
THORACIC INJURIES	C14.88.58.		
HEART INJURIES	C14.88.58.1	C14.88.38.	
RIB FRACTURES	C14.88.58.1	C14.88.30.1	
WOUND INFECTION	C14.88.60.	C1.30.58.	
WOUNDS, GUNSHOT	C14.88.62.		

* INDICATES PROVISIONAL HEADING

Sample page from a tree

A partial extract from published MeSH presentations is given. They are to be compared with the presently UNOFFICIAL hedges useful in searching.

Alphabetical Listing:

EYE (A1, A9)
see also related
CYCLOPLEGICS (D4)
INTRAOCULAR PRESSURE (G1)
REFRACTION, OCULAR (E1)
VISION (G1)
XU COLOBOMA (A1, A9)

EYE, ARTIFICIAL (E4)

EYE BANKS see under TISSUE BANKS (E4, G3)

EYE BURNS (C11, C14)

EYE DISEASES (C11)
XR OPHTHALMOLOGY (G2)

EYE FOREIGN BODIES (C11, C14)

EYE INJURIES (C11, C14)

EYE MANIFESTATIONS (C11)

EYE MOVEMENTS (E1, F)
see also related
ELECTROOCULOGRAPHY (E1)
XU RAPID EYE MOVEMENTS (E1, F)

EYE NEOPLASMS (C2, C11)

EYE PROTEINS (D10)

Categories:

EYE (A1)
- Anterior Chamber
- Conjunctiva
- Cornea
- Lacrimal Apparatus
- Lens, Crystalline
- Retina
- Sclera
- Uvea
- Vitreous Body

EYEBROWS (A1)
EYELASHES (A1)
EYELIDS (A1)
FUNDUS OCULI
IRIS
- Pupil

EYE BURNS (C14)
EYE DISEASES
- Blepharoptosis
- Hyphema
- Microphthalmos (C16)
- Stevens-Johnson Syndrome (C4, C12)

EYE FOREIGN BODIES (C14)
EYE INJURIES (C14)
- Eye Burns (C14)
- Eye Foreign Bodies (C14)

EYE MANIFESTATIONS
- Diabetic Retinopathy (C7, C8)

EYE NEOPLASMS (C2)
- Choroid Neoplasms (C2)
- Retinoblastoma (C2)

Trees:

EYE
- ANTERIOR CHAMBER
  - AQUEOUS HUMOR
- CONJUNCTIVA
- CORNEA
  - *DESCEMET'S MEMBRANE
- EYEBROWS
- EYELASHES
- EYELIDS
- LACRIMAL APPARATUS
- LENS, CRYSTALLINE
- RETINA
  - FUNDUS OCULI
  - MACULA LUTEA
  - RODS AND CONES
- SCLERA
- UVEA
  - CHOROID
  - CILIARY BODY
  - IRIS
  - PUPIL
- VITREOUS BODY

EYE DISEASES
- ALBINISM
- ASTHENOPIA
- BEHCET'S SYNDROME
- CATARACT
- CONJUNCTIVITIS
  - CONJUNCTIVITIS, INCLUSION
  - KERATOCONJUNCTIVITIS
  - OPHTHALMIA NEONATORUM
  - PTERYGIUM
  - REITER'S DISEASE
- CORNEAL DISEASES (NON MESH)
  - *ARCUS SENILIS
  - CORNEAL DYSTROPHIES
  - CORNEAL OPACITY
  - KERATITIS
  - KERATOCONUS
- EXOPHTHALMOS
  - GOITER, EXOPHTHALMIC
- EYELID DISEASES (NON MESH)
  - *BLEPHARITIS
  - BLEPHAROPTOSIS

Hedge:

A1,A9	EYE	E2	ORTHOPTICS
A2	OCULOMOTOR MUSCLES	E4	EYE, ARTIFICIAL
A7	OPHTHALMIC ARTERY	E4	CATARACT EXTRACTION
A8	OPHTHALMIC NERVE	F1	VISUAL PERCEPTION
C11	EYE DISEASES	G1	EYE MOVEMENTS
D5	MYDRIATICS	G1	VISION
D13	OPHTHALMIC SOLUTIONS	G2	OPHTHALMOLOGY
E1	OPHTHALMOSCOPY	H	OPTICS

DATA FORM ABBREVIATIONS

MeSH TERM	DATA FORM
AMERICAN DENTAL ASSOCIATION	ADA
AMERICAN MEDICAL ASSOCIATION	AMA
AMERICAN NURSES' ASSOCIATION	ANA
HEALTH INSURANCE FOR AGED, TITLE 18	MEDICARE
UNITED STATES FOOD AND DRUG ADMINISTRATION	FDA
UNITED STATES NATIONAL INSTITUTES OF HEALTH	NIH
UNITED STATES NATIONAL LIBRARY OF MEDICINE	NLM
UNITED STATES OFFICE OF ECONOMIC OPPORTUNITY	OEO
UNITED STATES PUBLIC HEALTH SERVICE	PHS
UNITED STATES VETERANS ADMINISTRATION	VA
WORLD HEALTH ORGANIZATION	WHO
CONDITIONING (PSYCHOLOGY)	CONDITIONING
CONFLICT (PSYCHOLOGY)	CONFLICT
COUNTERTRANSFERENCE (PSYCHOLOGY)	COUNTERTRANSFERENCE
CRITICAL PERIOD (PSYCHOLOGY)	CRITICAL PERIOD
DISPLACEMENT (PSYCHOLOGY)	DISPLACEMENT
EXTINCTION (PSYCHOLOGY)	EXTINCTION
GENERALIZATION (PSYCHOLOGY)	GENERALIZATION
HANDLING (PSYCHOLOGY)	HANDLING
IDENTIFICATION (PSYCHOLOGY)	IDENTIFICATION
IMPRINTING (PSYCHOLOGY)	IMPRINTING
INTROVERSION (PSYCHOLOGY)	INTROVERSION
PRACTICE (PSYCHOLOGY)	PRACTICE
REINFORCEMENT (PSYCHOLOGY)	REINFORCEMENT
SET (PSYCHOLOGY)	SET
TRANSFER (PSYCHOLOGY)	TRANSFER
TRANSFERENCE (PSYCHOLOGY)	TRANSFERENCE
CROSSING OVER (GENETICS)	CROSSING OVER
POLYMORPHISM (GENETICS)	POLYMORPHISM
SELECTION (GENETICS)	SELECTION
VARIATION (GENETICS)	VARIATION
PREGNANCY COMPLICATIONS	PREGNANCY COMPL.
PREGNANCY COMPLICATIONS, CARDIOVASCULAR	PREGNANCY COMPL., CARDIOVASCULAR
PREGNANCY COMPLICATIONS, HEMATOLOGIC	PREGNANCY COMPL., HEMATOLOGIC
PREGNANCY COMPLICATIONS, INFECTIOUS	PREGNANCY COMPL., INFECTIOUS
CYTOPATHOGENIC EFFECT, VIRAL	CPE
HEPATITIS VIRUS, INFECTIOUS CANINE	HEPATITIS VIRUS, CANINE
LYMPHOCYTIC CHORIOMENINGITIS VIRUS	LYMPHOCYTIC CHORIO. VIRUS
ADENOSINE CYCLIC 3',5'-PHOSPHATE	CYCL AMP
ANTI-INFLAMMATORY AGENTS, TOPICAL	ANTI-INFLAMM. AGENTS, TOPICAL
ETHIONIAMIDE	ETHIONAMIDE or ETHIONIAMIDE
GLUCOSEPHOSPHATE DEHYDROGENASE	GPD

MeSH TERM	DATA FORM
ANEMIA, HEMOLYTIC, CONGENITAL NONSPHEROCYTIC	ANEMIA, HEMOLYTIC CON NONSPHEROCYTIC
ECCENTRO-OSTEOCHONDRODYSPLASIA	ECCENTRO-OSTEOCHONDRODYSPLASIA or ECCENTRO- OSTEOCHONDRODYSPLASIA
PULMONARY ADENOMATOSIS, BOVINE	PULM ADENOMATOSIS, BOVINE
PULMONARY ADENOMATOSIS, OVINE	PULM ADENOMATOSIS, OVINE
STAPHYLOCOCCAL INFECTIONS	STAPH INFECTIONS
TENDINITIS	TENDINITIS or TENDONITIS
THROMBELASTOGRAPHY	THROMBELASTOGRAPHY or THROMBOELASTOGRAPHY

MeSH

EXERCISE I

In Non-Depth Indexing we are frequently called upon to use a general term instead of three or four specifics which would be required for Depth Indexing.

Pretend that you need the following groups of concepts for Non-Depth Indexing. Using the MeSH categories, what single main heading would you use to cover the groups typed below?

1. Papova virus, Yaba virus and myxoma virus
2. Myotonia, myoclonus and amyotonia
3. Raticides, insecticides and weed-killers
4. Pilocarpine, acetylcholine and neostigmine
5. The thymus and lymph nodes
6. The eyes, eyebrows and eyelids
7. Basophils, lymphocytes and erythrocytes
8. Anthracosilicosis, silicosis and silico-tuberculosis
9. Rice, puffed rice, wheat, puffed wheat and cornflakes
10. Nerve block and spinal anesthesia

MeSH

EXERCISE II

What main heading or main headings in MeSH do you think should be used to cover articles on the following subjects? The word or phrase below was that used by the author and represents terms or concepts required for indexing.

1. Radiorenography
2. Subvalvular stenosis
3. Lichen
4. Dishydrosis
5. Disabled persons
6. Hepatic amebiasis
7. Mass cancer x-ray
8. Microfilaria diurna infection
9. Prefrontal lobotomy
10. Pulmonary lobectomy
11. Ventricular neoplasms
12. Bacterial survival
13. Visual pigments
14. Reinforcement
15. Medical jurisprudence
16. Urinary tract
17. Dog bites
18. Bicycles
19. Urinals
20. Bacterial culture
21. Leg fractures
22. Sodium-free diet
23. Cooked foods
24. Tomatoes
25. Cerebral edema
26. Hepatic cirrhosis
27. Chocolate candy
28. Double vision
29. Posterior cranial fossa
30. Sympathetic nerves

DATA FORM

I. Purpose and disposition

II. Evolution (See p.37)

CLML
IM 1963
IM 1965

III. Appearance (See pp. 39-40)

general neatness
clarity in typing
uniform margins
correct spelling
exact alignment of headings
exact alignment of X's
pencilled emendations
uniform typography
MAIN HEADINGS *subheading
double-spacing between entries

IV. Descriptive indexing

standard date; non-standard date
pagination: standard, non-standard, passim, +
opt. pagination
author data (Print)
no author; anonymous block
author data (Sort) (See p.
title--translation, brackets, language symbol
title - vernacular: punctuation, accents
marking of title: half-blocks, subtitles, capitalization, accents, numerals, punctuation
supplied titles

V. Subject Indexing

MAIN HEADING
subheading
IM and NIM: definition and purpose
Check Tags

DATA FORMS

The following three sheets are Data Forms. A was used in the preparation of CURRENT LIST OF MEDICAL LITERATURE and INDEX MEDICUS to 1963. B was the first Data Form for input into MEDLARS. C is the current form.

Paging

Special Author Data

Senior Author Code

Title - Translation

Listomatic Code

Indexer

Subject Analysis

Proofreader

DATA FORM

National Library of Medicine - Index Medicus - (PHS-3266, Rev. 1-61)

A

A–anonymous		PAGINATION	OPT. PAGINATION
D–non-std date			
P–non-std pagination			

AUTHOR DATA *(Print)*

AUTHOR DATA *(Sort)*

TITLE *(Translation)*

B

TITLE *(Vernacular or Transliterated Vernacular)*

SUBJECT ANALYSIS

IM	NIM	HEADING
		REVIEW-- References
		AGE GROUPS
		Infont, Newborn (to 1 Mo.)
		Infant (1 Mo. to 2 Yrs.)
		Child (2-12 Yrs.)
		Adolescence (13-18 Yrs.)
		Aged (66 Yrs. & Older)
		Pregnoncy
		EXPER. ANIMALS(B1, B2)-Specify
		RACE –(I)– Specify

NON IM - CHECK TAGS

NIM	HEADING	
	TYPE OF ARTICLE	
	Biographies	
	Obituories	
	History	
	Experimentol Study (lob)	
	Toxicologic Report	
	Popular	
	GEOGRAPHIC HEADINGS-Specify	
	PHS SUPPORT GROUPS	
	PHS (Public Health Service)	
	NIH (Not. Insts. of Health)	
	NCI (Concer)	C or CA
	NHI (Heort)	H or HE
	NIAID (Allergy)	AI or E
	NIAMD (Arthritis)	A or AM
	NICHHD (Child Heolth)	HD
	NIDR (Dentol Reseorch)	D or DE
	NIGMS (Gen. Med. Sci.)	
	NIMH (Mental Heolth)	M or MH
	NINDB (Neuro.-Blind.)	B or NB
	DRF (Div. of Reseorch Focilities)	FR
	BMS (Bureau of Medicol Services)	
	BSSCH (BSS-Community Heolth)	
	BSSEH (BSS-Environmentol Heolth)	
	PROVISIONAL HEADINGS	

A_anonymous		PAGINATION	OPT. PAGINATION
D_non-std date			
P_non-std pagination			

AUTHOR DATA *(Print)*

AUTHOR DATA *(Sort)*

TITLE *(English or English Translation)*

C

TITLE *(Vernacular or Transliterated Vernacular)*

IM	NIM	MAIN HEADING	*subheading
		REVIEW---	References
		PREGNANCY	
		RACIAL AND ETHNIC GROUPS	
		GEOGRAPHIC HEADINGS	
		PROVISIONAL HEADINGS	

IM	NIM	CHECK TAGS
		INFANT, NEWBORN (to 1 mo.)
		INFANT (1-23 mos.)
		CHILD, PRESCHOOL (2-5 yrs.)
		CHILD (6-12 yrs.)
		ADOLESCENCE (13-18 yrs.)
		ADULT (19-44 yrs.)
		MIDDLE AGE (45-64 yrs.)
		AGED (65- yrs.)
		CATS
		CATTLE
		DOGS
		GUINEA PIGS
		MICE
		RABBITS
		RATS
		HISTORY OF MEDICINE
		ANCIENT
		MEDIEVAL
		MODERN
		15TH CENT.
		16TH CENT.
		17TH CENT.
		18TH CENT.
		19TH CENT.
		20TH CENT.
		HISTORICAL ARTICLE
		HISTORICAL BIOGRAPHY
		CURRENT BIOG-OBIT
		ANIMAL EXPERIMENTS
		HUMAN
		IN VITRO
		FEMALE
		MALE
		CASE REPORT
		CLINICAL RESEARCH
		COMPARATIVE STUDY

PHS-3266
REV. 10-65

DATA FORM-INDEX MEDICUS

GPO 944-391

HEW-Lex

VI. Check Tags

definition and purpose
IM and NIM: review of definition and purpose
Age Groups: use, age limitations, rules governing IM, rules governing NIM
Animals: use, rules governing IM and NIM, differentiation of experimental and veterinary animals
history tags: purpose, rules governing IM and NIM
NIM tags: definition and purpose
- Historical Article: use and relation to Historical Biography
- Historical Biography: use and relation to Historical Article and current biography
- Current Biog-Obit: limitations
- Animal Experiments
- Human: when used and when not used
- In Vitro: MeSH definition and restriction
- Female, Male
- Case report: MeSH definition and restriction
- Clinical Research: MeSH definition and restriction
- Comparative Study: MeSH definition and restriction

Provisional Headings: definition and purpose
Geographic Headings: use
Racial and Ethnic Groups: differentiation and use
PREGNANCY: normal and pathological, when IM and when NIM
Review: purpose, coverage, differentiation from historical articles, use of pink Data Form, approval by Head, Index Section

VII. Mandatory and optional abbreviations

VIII. Special handling of physicians and famous persons

position on Data Form
definition of FAMOUS PERSONS
required Check Tags

A_anonymous		PAGINATION	OPT. PAGINATION
D_non-std data		398-400	
P_non-std pagination			

AUTHOR DATA (Print)

Charen TG, Iri H, Hayashida M, Fukudome T

AUTHOR DATA (Sort)

TITLE (English or English Translation)

TITLE (Vernacular or Transliterated Vernacular)

IM	NIM	MAIN HEADING *subheading
		REVIEW--- References
		PREGNANCY
X		OSTEITIS FIBROSA *pathology
X		LIVER GLYCOGEN *metabolism
X		HYPOPHYSECTOMY
		ADRENALECTOMY
		CALCIUM *blood
		CALCIUM *metabolism
		RACIAL AND ETHNIC GROUPS
		GEOGRAPHIC HEADINGS
		PROVISIONAL HEADINGS
	X	FIBROUS DYSPLASIA *pathology

IM	NIM	CHECK TAGS
		INFANT, NEWBORN (to 1 mo.)
		INFANT (1-23 mos.)
		CHILD, PRESCHOOL (2-5 yrs.)
		CHILD (6-12 yrs.)
		ADOLESCENCE (13-18 yrs.)
		ADULT (19-44 yrs.)
		MIDDLE AGE (45-64 yrs.)
		AGED (65- yrs.)
		CATS
		CATTLE
		DOGS
		GUINEA PIGS
	X	MICE
		RABBITS
	X	RATS
		HISTORY OF MEDICINE
		ANCIENT
		MEDIEVAL
		MODERN
		15TH CENT.
		16TH CENT.
		17TH CENT.
		18TH CENT.
		19TH CENT.
		20TH CENT.
		HISTORICAL ARTICLE
		HISTORICAL BIOGRAPHY
		CURRENT BIOG-OBIT
	X	ANIMAL EXPERIMENTS
	X	HUMAN
		IN VITRO
		FEMALE
	X	MALE
		CASE REPORT
		CLINICAL RESEARCH
		COMPARATIVE STUDY

A_anonymous		PAGINATION	OPT. PAGINATION
D_non-std date		385-409	
P_non-std pagination			

AUTHOR DATA *(Print)*

AUTHOR DATA *(Sort)*

TITLE *(English or English Translation)*

TITLE *(Vernacular or Transliterated Vernacular)*

IM	NIM	MAIN HEADING *subheading	IM	NIM	CHECK TAGS
		REVIEW--- References		X	INFANT, NEWBORN (to 1 mo.)
		PREGNANCY		X	INFANT (1-23 mos.)
				X	CHILD, PRESCHOOL (2-5 yrs.)
		SPLEEN *abnormalities		X	CHILD (6-12 yrs.)
X		CARDIOVASCULAR DISEASES *diagnosis		X	ADOLESCENCE (13-18 yrs.)
		RUBELLA *complications		X	ADULT (19-44 yrs.)
		ELLIS-VAN CREVELD SYNDROME		X	MIDDLE AGE (45-64 yrs.)
		TRISOMY			AGED (65- yrs.)
		LIPOCHONDRODYSTROPHY			CATS
		HYPERCALCEMIA			CATTLE
		DEAFNESS *congenital			DOGS
		EHLERS-DANLOS SYNDROME			GUINEA PIGS
		HEART DEFECTS, CONGENITAL			MICE
		ARACHNODACTYLY			RABBITS
		CARDIOVASCULAR SYSTEM *abnormalities			RATS
		TURNER'S SYNDROME			HISTORY OF MEDICINE
		HEART SEPTAL DEFECTS, VENTRICULAR			ANCIENT
		MONGOLISM			MEDIEVAL
		HEART SEPTAL DEFECTS, ATRIAL			MODERN
		FRIEDREICH'S ATAXIA			15TH CENT.
		GLUCOSIDASE *metabolism			16TH CENT.
		RACIAL AND ETHNIC GROUPS			17TH CENT.
	X	MUSCULAR DYSTROPHY			18TH CENT.
	X	AUTONOMIC DYSFUNCTION *familial & genetic			19TH CENT.
	X	GLYCOGENOSIS			20TH CENT.
		GEOGRAPHIC HEADINGS			HISTORICAL ARTICLE
	X	HAND DEFORMITIES *familial & genetic			HISTORICAL BIOGRAPHY
	X	JEWS			CURRENT BIOG-OBIT
	X	METABOLISM, INBORN ERRORS			ANIMAL EXPERIMENTS
				X	HUMAN
		PROVISIONAL HEADINGS			IN VITRO
				X	FEMALE
				X	MALE
					CASE REPORT
					CLINICAL RESEARCH
					COMPARATIVE STUDY

SORT AUTHOR

1. Alphabetization needed for the published INDEX MEDICUS:
   López F
   López T
   López Alonso B
   López García A

2. Hypothetical order in which the names entered the computer:
   López García A
   López T
   López F
   López Alonso B

3. Numerical values are assigned to letters, spaces, punctuation and accents:

A=21	H=30	O=46	V=65
B=22	I=31	P=47	W=66
C=23	J=41	Q=50	X=67
D=24	K=42	R=51	Y=70
E=25	L=43	S=62	Z=71
F=26	M=44	T=63	accent=12
G=27	N=45	U=64	space=15

   Thus, the name lopez reads l=43 o=46 ´=12 p=47 e=25 z=71 or 43 46 12 47 25 71. For alphabetization, accents are not needed so Lopez reads 4346472571.

4. Converting the names as entered above in paragraph 2, they read thus, including 15 for the space in the compound names:
   43 46 47 25 71 15 27 21 51 23 31 21 15 21
   43 46 47 25 71 15 63
   43 46 47 25 71 15 26
   43 46 47 25 71 15 21 43 46 45 62 46 15 22

5. Based on numerical values and arranging in correct order by the above numbers, the resultant array would be
   Lopez Alonso B
   Lopez F
   Lopez Garcia A
   Lopez T but this is still not correct.

6. By arbitrarily introducing AA (i.e., 21 21) between compound names instead of spaces, the resultant coding is

43 46 47 25 71 21 21 27 21 51 23 31 21 15 21
43 46 47 25 71 15 63
43 46 47 25 71 15 26
43 46 47 25 71 21 21 21 43 46 45 62 46 15 22

7. Now, arranging in numerical order, we have

43 46 47 25 71 15 26
43 46 47 25 71 15 63
43 46 47 25 71 21 21 21 43 46 45 62 46 15 22
43 46 47 25 71 21 21 27 21 51 23 31 21 15 21

8. Converted by the electronic printer this reads

lopez f
lopez t
lopez alonso b
lopez garcia a

9. With internal restoration of capitalization and accents for the printed page, this becomes as required

López F
López T
López Alonso B
López García A

CHECK TAGS

A Check Tag is simply an arbitrary item which must be looked for ROUTINELY in every article. It is a facet of an article which is of potential significance to the most important special-interest groups we serve: the clinicians, the scientists in experimental research, the NLM History of Medicine Division, and the Drug Literature Program. The Check Tags indicated on the Data Form reflect the present wishes of these groups and could be modified under the supervision of MeSH should more or different ones be found essential to the medical community.

A Data Form bearing the main heading GOUT and the Check Tag CHILD could mean three things:

1. that an article was entitled GOUT IN CHILDREN and concerned this disease in this age group in general as a clinical entity;

2. that an article was entitled GOUT and in reporting his cases, the author listed seven of which one was a child;

3. that an article was entitled GOUT IN A CHILD: AN UNUSUAL CASE.

The coordination of GOUT and CHILD in any of these hypothetical articles will bring forth from the computer on a requested search all three in answer to this question:

"Do you have any article in your system on gout in which a child figures?"

If we judge the main headings under which an Indexer indexes an article to be the most important aspect of indexing, the second most important is the Check Tag. Its value to retrieval cannot be over-emphasized and an Indexer must learn to seek it out and supply it automatically.

facility design and construction (J) 8/16/67
J.12.22

architecture, exterior and interior design and construction of facilities other than hospitals, e.g., dental schools, medical schools, ambulatory care clinics, and specified units of health care facilities

INDEX UNDER: ARCHITECTURE (J)

factor V deficiency (C9) 7/9/64
C9.58.9.1

a rare hemorrhagic tendency known as parahemophilia or hypoproaccelerinemia, probably an inherited condition

INDEX UNDER: HYPOPROTHROMBINEMIAS

factor XI deficiency (C9) 11/4/66
C9.58.9.1

hemorrhagic diathesis due to deficiency of plasma thromboplastin antecedent, factor XI; PTA deficiency

INDEX UNDER: HEMORRHAGIC DIATHESIS

factor XIII (D7) 11/24/64
D7.60.35.1

a blood clotting factor; after activation by thrombin, it is responsible, together with calcium, for the formation of a fibrin structure which is insoluble in hydrogen-bond breaking solvents
syn: fibrin stabilizing factor (FSF); Laki-Lorand factor (LL Factor); fibrinase

INDEX UNDER: BLOOD COAGULATION FACTORS

false positive reaction (E1) 7/10/68
E1.44

the occurrence of a positive test result in conditions other than that for which the test is presumably specific

Valid subheadings: +classification, +history

INDEX UNDER: appropriate disease main heading +diagnosis
or appropriate test main heading

fat tolerance test (E1) 7/25/63
E1.9.13

level of blood lipids after administration of a fat meal

INDEX UNDER: FATS

fatty streak, arterial (C8) 3/2/64
C8.91.10.1

streaking of the arteries, especially the aorta, with fatty tissue; being investigated as a precursor to atheromatous plaques and lesions of atherosclerosis. Possibly correlated with cholesterol in the diet

INDEX UNDER: ARTERIOSCLEROSIS *pathology

Favre-Racouchot syndrome (C12)
C12.30 9/8/64

colloid degenerative changes of connective tissue in the epidermis of elderly people
syn: cutaneous nodular elastoidosis with cysts and comedones

INDEX UNDER: SKIN DISEASES

DATA FORM

EXERCISE I

Check Tags

Using a Data Form for reference, indicate here what check tag or tags, if any, you would index under for articles on subjects discussing the following:

1. both humans and animals
2. children without the exact age indicated by the author
3. US Army recruits
4. both rats and pigs
5. a 70-year-old elephant
6. newborn mice
7. an MD dying in 1965
8. an MD accepting an award
9. a biographical sketch of 20th century Nobel Prize winners in medicine
10. the comparative effects of chlorpromazine on schizophrenics and neurotics
11. the lung capacity of smokers
12. the complications of pregnancy in dogs
13. the contribution of Benjamin Franklin to 18th century electrophysiology
14. a history of syphilis giving case studies of famous artists
15. the growth of infants
16. submerged bacterial cultures
17. ancient medicine in China
18. an unusual case of staphylococcal infection
19. liver circulation in human volunteers
20. treatment of chickenpox in preschool children

DATA FORM

EXERCISE II

IM & NIM

Using a Data Form as a reference, indicate whether you would index the concept typed in CAPITALS as IM or NIM.

1. the heart rate in INFANTS
2. breathing in NEWBORN INFANTS
3. respiratory diseases in NEWBORN INFANTS
4. respiratory diseases in INFANTS
5. headache in the MIDDLE AGED
6. smoking among American ADOLESCENTS
7. INFANT mortality in thalidomide therapy
8. PREGNANCY in experimental schistosomiasis in DOGS
9. PREGNANCY in DOGS
10. ectopic PREGNANCY in a pet BEAGLE
11. plant poisoning in CATTLE
12. precocious adult behavior in young RATS
13. experimental arthritis in MICE
14. motor neurons in RABBITS
15. injuries in covered wagons in the 19TH CENTURY
16. injuries in chariots in ANCIENT ROME
17. history of research on the liver in the 17TH and 18TH CENTURIES
18. development of x-ray technics TODAY
19. blood groups in NEGROES
20. peptic ulcer among ESKIMOS

SUBHEADINGS

I. Purpose and need for subheadings

II. Coordination

Philosophy of coordination
Types of coordination in MEDLARS (See p. 48)

- main heading + main heading
- main heading + check tag
- main heading + subheading
- pre-coordinated main heading

III. History of subheadings at NLM (See p. 49)

- pre-1954
- SHAL 1954
- MeSH 1960
- MeSH 1965-present

IV. Subheading lists (See pp. 50-53)

- alphabetical listing
- categorized listing

V. Application of subheadings by category

VI. Definition of subheadings by category

VII. Specialized uses of subheadings (See pp. 57-60)

VIII. Applied uses of subheadings

- typography and location on Data Form
- permissible number for same main headings (See p. 56)
- permissible number in relation to IM and NIM
- invalid main heading/subheading combinations
- coverage in the Indexing Manual

Types of Coordination in MEDLARS

X = a heading to be printed in INDEX MEDICUS

1. MAIN HEADING + MAIN HEADING	
a. both equal in significance	X LIVER X GOUT
b. one subordinate	X SMOKING STATISTICS
2. MAIN HEADING + Check Tag	X HEPATITIS + CHILD
3. MAIN HEADING + subheading	X HEPATITIS *prevention & control
4. PRE-COORDINATED MAIN HEADING	
a. two MAIN HEADINGS originally	X LIVER GLYCOGEN: originally X LIVER + X GLYCOGEN
	X MITOCHONDRIA, LIVER: originally X MITOCHONDRIA + X LIVER
b. MAIN HEADING + Check Tag	X DIABETES MELLITUS, JUVENILE: originally X DIABETES MELLITUS + CHILD
c. MAIN HEADING + subheading	X COMMUNICABLE DISEASE CONTROL: originally X COMMUNICABLE DISEASES *prevention & control

SUBHEADINGS: HISTORY

EFFECT OF SODIUM AND POTASSIUM ON LIVER METABOLISM OF GLUCOSE

1954-1959:

LIVER - metabolism
glucose, eff. of sodium & potassium

GLUCOSE - metabolism
liver, eff. of sodium & potassium

SODIUM - effects
on liver metab. of glucose

POTASSIUM - effects
on liver metab. of glucose

1960-1962:

LIVER - metabolism

GLUCOSE - metabolism

SODIUM - pharmacology

POTASSIUM - pharmacology

1963-1965:

LIVER	SODIUM
METABOLISM	PHARMACOLOGY
GLUCOSE	POTASSIUM

Problem: Effect of glucose on liver metabolism of sodium

LIVER	GLUCOSE
METABOLISM	PHARMACOLOGY
SODIUM	

Identical main headings in correct coordinations result in false drops

1966-

LIVER *metabolism

GLUCOSE *metabolism

SODIUM *pharmacology (later *pharmacodynamics)

POTASSIUM *pharmacology (later *pharmacodynamics)

INDEX MEDICUS SUBHEADINGS - 1969

Alphabetical List of 60 Subheadings

*abnormalities (A)
*administration & dosage (D)
*adverse effects (D,E,H)
*analysis (A,B,D,G,J)
*anatomy & histology (A,B)
*antagonists & inhibitors (D)
*biosynthesis (D)
*blood (C,D,F)
*blood supply (A)
*cerebrospinal fluid (C,D,F)
*chemical synthesis (D)
*chemically induced (C,F)
*classification (B,C,D,E,F,G,H,I,N)
*complications (C,F)
*congenital (C)
*cytology (A,B)
*diagnosis (C,F)
*diagnostic use (D,H)
*drug effects (A,B,F,G)
*drug therapy (C,F)
*education (F,G,H,I,N)
*embryology (A,B)
*enzymology (A,B,C,F)
*etiology (C,F)
*familial & genetic (C,F)
*growth & development (A,B)
*history (C,D,E,F,G,H,I,J,K,L,M,N)
*immunology (A,B,C)
*injuries (A)
*innervation (A)
*instrumentation (E,F,G,H,J)
*isolation & purification (B,D)
*manpower (E,F,G,H,I,L,N)
*metabolism (A,B,C,D,F)
*microbiology (A,C)
*mortality (C,E,F)
*nursing (C,F)
*occurrence (C,F)
*pathogenicity (B)
*pathology (A,C,F)
*pharmacodynamics (D)
*physiology (A,B,D,G)
*physiopathology (A,C,F)
*poisoning (D,J)
*prevention & control (C,F,G)
*radiation effects (A,B,D,G)
*radiography (A,C,F)
*radiotherapy (C,F)
*rehabilitation (C,F)
*secretion (A,D)
*standards (D,E,F,H,I,J,L,N)
*supply & distribution (D,E,L,N)
*surgery (A,C,F)
*therapeutic use (D,H)
*therapy (C,F)
*toxicity (D,J)
*transplantation (A)
*urine (C,D,F)
*utilization (E,L,N)
*veterinary (C,E)

INDEX MEDICUS SUBHEADINGS - 1969

Category A - Anatomical Terms

*abnormalities
*analysis
*anatomy & histology
*blood supply
*cytology
*drug effects
*embryology
*enzymology
*growth & development
*immunology
*injuries
*innervation
*metabolism
*microbiology
*pathology
*physiology
*physiopathology
*radiation effects
*radiography
*secretion
*surgery
*transplantation

Category B - Organisms

*analysis
*anatomy & histology
*classification
*cytology
*drug effects
*embryology
*enzymology
*growth & development
*immunology
*isolation & purification
*metabolism
*pathogenicity
*physiology
*radiation effects

Category C - Diseases

*blood
*cerebrospinal fluid
*chemically induced
*classification
*complications
*congenital
*diagnosis
*drug therapy
*enzymology
*etiology
*familial & genetic
*history
*immunology
*metabolism
*microbiology
*mortality
*nursing
*occurrence
*pathology
*physiopathology
*prevention & control
*radiography
*radiotherapy
*rehabilitation
*surgery
*therapy
*urine
*veterinary

Category D - Chemicals and Drugs

*administration & dosage
*adverse effects
*analysis
*antagonists & inhibitors
*biosynthesis
*blood
*cerebrospinal fluid
*chemical synthesis
*classification
*diagnostic use
*history
*isolation & purification
*metabolism
*pharmacodynamics
*physiology
*poisoning
*radiation effects
*secretion
*standards
*supply & distribution
*therapeutic use
*toxicity
*urine

Category E - Analytical, Diagnostic and Therapeutic Technics and Equipment

*adverse effects
*classification
*history
*instrumentation
*manpower
*mortality
*standards
*supply & distribution
*utilization
*veterinary

Category F - Psychiatry and Psychology

*blood
*cerebrospinal fluid
*chemically induced
*classification
*complications
*diagnosis
*drug effects
*drug therapy
*education
*enzymology
*etiology
*familial & genetic
*history
*instrumentation
*manpower
*metabolism
*mortality
*nursing
*occurrence
*pathology
*physiopathology
*prevention & control
*radiography
*radiotherapy
*rehabilitation
*standards
*surgery
*therapy
*urine

Category G - Biological Sciences

*analysis
*classification
*drug effects
*education
*history
*instrumentation
*manpower
*physiology
*prevention & control
*radiation effects

Category H - Physical Sciences

*adverse effects
*classification
*diagnostic use
*education
*history
*instrumentation
*manpower
*standards
*therapeutic use

Category I - Social Sciences

*classification
*education
*history
*manpower
*standards

Category J - Technology, Commerce and Industry

*analysis
*history
*instrumentation
*poisoning
*standards
*toxicity

Category K - Humanities

*history

Category L - Communication, Library Science and Documentation

*history
*manpower
*standards
*supply & distribution
*utilization

Category M - Named Groups of Persons

*history

Category N - Health Care

*classification
*education
*history
*manpower
*standards
*supply & distribution
*utilization

Since subheadings fall into natural groups, it is possible to conceive of a treeing of subheadings to show relationships in the same way main headings are arranged in the MeSH Tree Structures. Like MeSH categories, the groups below should always be examined for the most specific application in the permitted category.

*anatomy & histology
  *blood supply
  *cytology
  *embryology
    *abnormalities
  *innervation
  *pathology

*physiology
  *growth & development
  *metabolism
    *biosynthesis
    *blood *urine *CSF ✠
    *enzymology
  *physiopathology
  *secretion

*therapy
  *drug therapy
    *administration & dosage
    *adverse effects
  *nursing
  *prevention & control
  *radiotherapy
  *rehabilitation
  *surgery
    *transplantation

*etiology
  *chemically induced
  *familial & genetic
  *immunology
  *microbiology
    *pathogenicity

*diagnosis
  *enzymology
  *immunology
  *microbiology
  *radiography

*analysis ✠
  *blood *urine *CSF
  *enzymology
  *isolation & purification

*pharmacodynamics
  *administration & dosage
  *drug effects
    *adverse effects
    *poisoning
    *toxicity

*occurrence
  *familial & genetic
  *mortality
  *veterinary

*instrumentation
  *supply & distribution
  *utilization

(radiodiagnosis=*radiography
radiotherapy=*radiotherapy
radiobiologic action=*radiation effects)

✠ On the Data Form only *cerebrospinal fluid is permitted

SUBHEADINGS

Common Combinations

The groups below are commonly encountered pairings of combinations of subheadings. Add others to the list as you meet them:

(Disease A) *etiology
(Disease B) *complications - where the cause-and-effect relationship is known

(Disease A) *complications
(Disease B) *complications - where the diseases are associated but cause-and-effect is not stated

(Disease) *drug therapy
(Drug) *therapeutic use

(Organ) *drug effects
(Drug) *pharmacodynamics

(Organism) *drug effects
(Drug) *pharmacodynamics

(Organ) *metabolism
(Substance) *metabolism

(Organism) *metabolism
(Substance) *metabolism

(Disease) *metabolism
(Organ) *metabolism
(Substance) *metabolism

(Disease) *chemically induced
(Drug) *adverse effects

(Organ) *radiation effects
RADIATION EFFECTS
specific radiation

Multiple Subheadings as IM

ETIOLOGY

Intracranial abscesses of odontogenic origin. Hollis SA, et al. Oral Surg 23:277-95, Mar 67
Cit. no. 2267103

BRAIN NEOPLASMS

COMPLICATIONS

Paralysis of the muscles of mastication due to carcinomatosis. Butler DJ.
Brit Dent J 122:103-4, 7 Mar 67
Cit. no. 2300085

DIAGNOSIS

The sellar-cranial index. Martinez-Farinas LO.
Radiology 88:264-7, Feb 67
Cit. no. 2255216

BRANCHIOMA

ETIOLOGY

The histogenesis of the branchial cyst. Little JW, et al.
Amer J Path 50:533-47, Mar 67
Cit. no. 2273610

PATHOLOGY

The histogenesis of the branchial cyst. Little JW, et al.
Amer J Path 50:533-47, Mar 67
Cit. no. 2273610

A lymphoepithelial cyst of the oral cavity. Report of a case. Young WG, et al. Oral Surg 23:62-70, Jan 67,
Cit. no. 2223663

BREAST NEOPLASMS

COMPLICATIONS

Osteosarcoma of breast metastasizing to the oral cavity. Shapiro R, et al. Oral Surg 23:58-61, Jan 67
Cit. no. 2223662

RADIOTHERAPY

Analysis of tumor-recurrence times. Suit H, et al.
Radiology 88:311-21 passim, Feb 67
Cit. no. 2255230

BROMELAINS

THERAPEUTIC

OCCURRENCE

Occlusion of cerebral-palsied children. Rosenbaum CH, et al. J Dent [illegible] 1696-700, Nov-Dec 66

BURNS, ELECTRIC

PREVENTION & CONTROL

Electric mouth burns in children. Treatment and prevention. Fogh-Andersen P, et al.
Acta Chir Scand 131:214-8, Mar 66
Cit. no. 2306754

SURGERY

Electric mouth burns in children. Treatment and prevention. Fogh-Andersen P, et al.
Acta Chir Scand 131:214-8, Mar 66
Cit. no. 2306754

THERAPY

Electric mouth burns in children. Treatment and prevention. Fogh-Andersen P, et al.
Acta Chir Scand 131:214-8, Mar 66
Cit. no. 2306754

CACAO

Inhibition of hamster caries by cocoa. The effect of whole and defatted cocoa, and the absence of activity in cocoa fat. Stralfors A.
Arch Oral Biol 11:149-61, Feb 66
Cit. no. 2303651

Inhibition of hamster caries by cocoa. Caries inhibition of water and alcohol extracts of cocoa. Stralfors A.
Arch Oral Biol 11:323-8, Mar 66
Cit. no. 2275304

Effect on hamster caries by dialysed, detanned or carbon-treated water-extract of cocoa. Stralfors A.
Arch Oral Biol 11:609-15, Jun 66
Cit. no. 2257255

Residence time of nisin in the oral cavity following consumption of chocolate milk containing nisin. Claypool L, et al. J Dairy Sci 49:314-6, Mar 66
Cit. no. 2303075

CALCIFICATION, PHYSIOLOGIC

Calcifying ability of human body fluids. Pigman W, et al. [illegible] Oral Biol 11:815-24, Aug 66
[illegible] 5350

[illegible] related [illegible] calcifi[illegible]

Above as arrowed is an example of using the same main heading with different subheadings and making them all IM. This is a misleading policy and should be avoided.

Subheading Restrictions: HEART & MYOCARDIUM

These notes appear in another form in the Indexing Manual, 14.18.

△ HEART and MYOCARDIUM are frequently used interchangeably by authors. The Analyst will differentiate between them in the following way, regardless of the term used by the author either in the title or the text. If the organ is viewed as a pump, the correct heading is HEART; if viewed as tissue, the correct heading is MYOCARDIUM.

△ Only the following Subheadings are permissible with HEART:

*anatomy & histology	*microbiology	*radiation effects
*drug effects	*physiology	*radiography
*embryology	*physiopathology	*transplantation
*growth & development		

△ Only the following Subheadings are permissible with MYOCARDIUM:

	*immunology	
*analysis	*enzymology	*pathology
*cytology	*metabolism	

△ Do not use the following Subheadings for these Subheadings with the concept "heart" exist in MeSH as a pre-coordinated main heading:

*abnormalities	this is	HEART DEFECTS, CONGENITAL
*blood supply	this is	CORONARY VESSELS
*injuries	this is	HEART INJURIES
*innervation	this is	HEART CONDUCTION SYSTEM
*surgery	this is	HEART SURGERY

△ Articles on a foreign body of the heart will be indexed as HEART (IM) and FOREIGN BODIES (IM), not HEART DISEASES and not FOREIGN BODIES (NIM).

△ Articles on the heart in relation to pregnancy, will be indexed as HEART (IM) and PREGNANCY (IM) or any of the pre-coordinated PREGNANCY headings or any of the concepts related to pregnancy (e.g., LABOR; ANESTHESIA, OBSTETRICAL; ABORTION).

△ *secretion do not use with either HEART or MYOCARDIUM

SUBHEADINGS

*metabolism

△ The following words appear in titles and texts frequently . In MEDLARS they are properly covered by the subheading *metabolism.

absorption
binding
breakdown
conversion
degradation
distribution
elimination (consider *urine)
excretion (consider *urine)
incorporation
mobilization
release
secretion = *secretion
splitting
storage
synthesis = *biosynthesis
transport
turnover
uptake
utilization (but not the subheading *utilization)

△ *metabolism may be used with the names of organs (Category A), names of organisms (Category B), names of diseases (Category C) and names of drugs and chemicals (Category D).

PANCREAS *metabolism (A)

SALMONELLA *metabolism (B)

PANCREATITIS *metabolism (C)

SODIUM *metabolism (D)

△ Note that concepts such as hydrolysis, oxidation, demethylation, deamination, alkylation, etc. would fall within the definition of *metabolism also if taking place in tissue. If taking place in a test tube, without tissue present, the concepts would be considered "chemical" rather than metabolic and *metabolism would not apply.

SUBHEADINGS

The following titles taken from INDEX MEDICUS and elsewhere show the correct indexing of *manpower, *standards, *supply & distribution and *utilization. They will serve as examples of indexing articles of this type and may be used as models in indexing similar articles. No attempt is made below to multiple-index the other aspects of the title.

1. Medical manpower: a study in projection: HEALTH MANPOWER
2. Augmenting general practice in developing countries: GENERAL PRACTICE *manpower
3. Staffing a hospital nursing service: NURSING *manpower
4. Nursing manpower studies: NURSING *manpower
5. Organizing and staffing the emergency room: HOSPITAL EMERGENCY SERVICE *manpower
6. Recruiting psychiatric nurses: PSYCHIATRIC NURSING *manpower
7. Personnel shortages in hospital libraries: LIBRARIES, HOSPITAL *manpower
8. The shortage of hospital libraries: LIBRARIES, HOSPITAL *supply & distribution
9. Availability of encephalographic equipment in Ghana: ENCEPHALOGRAPHY *supply & distribution
10. The number of medical libraries in Brazil: LIBRARIES, MEDICAL *supply & distribution
11. The supply of penicillin in underdeveloped countries: PENICILLIN *supply & distribution
12. Alabama needs more physicians: PHYSICIANS *supply & distribution
13. The disappearing Pittsburgh physician: PHYSICIANS *supply & distribution
14. Physician needs for 1980: PHYSICIANS *supply & distribution
15. Nursing recruitment: NURSES *supply & distribution
16. Private duty nursing: some problems of supply and demand: NURSING, PRIVATE DUTY *supply & distribution
17. Recruitment of minority groups to become nursing students: STUDENTS, NURSING *supply & distribution
18. Availability of services for nursing care of the sick at home: HOME CARE SERVICES *supply & distribution

19. How can nursing care be measured? NURSING CARE *standards
20. New nursing home standards in Nova Scotia: NURSING HOMES *standards
21. Testing incoming goods to assure hospital products quality: HOSPITAL EQUIPMENT AND SUPPLIES *standards
22. How professional is professional nursing? NURSING *standards
23. The quality of hospital care: HOSPITALS *standards
24. Effective use of hospitals: HOSPITALS *utilization
25. Use of hospitals by Blue Cross members: HOSPITALS *utilization
26. Case loads in hospitals: HOSPITALS *utilization

There are many headings in MeSH to cover both the specialty, field, or service and also the person associated with the field, for example, DENTISTRY but also DENTISTS; PHARMACY but also PHARMACISTS. Most of the specialties and fields, however, are covered by only a single term which will refer to both the field and the practitioner in it.

When the question of manpower arises and both the field and the personal headings exist in MeSH, follow this pattern:

DENTISTRY *manpower BUT DENTISTS *supply & distribution
PHARMACY *manpower BUT PHARMACISTS *supply & distribution

In the above samples, both *manpower and *supply & distribution are available to the categories into which the main headings illustrated fall. When the need for the concept manpower arises in relation to a main heading which must stand for both the field and the practitioner, prefer *manpower:

NATUROPATHY *manpower NOT NATUROPATHY *supply & distribution

Using Subheadings

Reminders on the use of subheadings:

1. Index only by pairing a subheading with a main heading from the same category.

2. If using the same main heading more than once with two or more subheadings, make only one main heading/subheading pair IM: make the remaining pairs of this same main heading with other subheadings NIM.

3. Familiarize yourself with the Invalid Main Heading/ Subheading Combinations listed in the Indexing Manual, 12.5.

4. Restrict the use of subheadings

   - by using subheadings only as assigned by category

   - by avoiding nonsensical combinations (e.g., DIGESTION *analysis)

   - by checking the Indexing Manual

   - by checking the Integrated Authority File

   - by following announced restrictions

   - by using good sense

   - by not forcing a borderline or questionable application into a questionable interpretation

Exercise I

Check the correct MAIN HEADING *subheading combination

1. Liver function in gout

   a. LIVER *physiology
      GOUT *physiology

   b. LIVER *physiology
      GOUT *physiopathology

   c. LIVER *physiopathology
      GOUT *physiopathology

   d. LIVER *physiopathology
      GOUT *physiology

2. Measles in four brothers

   a. MEASLES *occurrence

   b. MEASLES *familial & genetic

3. Cytology of the dog lung

   a. LUNG *cytology
      DOGS *cytology

   c. LUNG *cytology
      DOGS *anatomy & histology

4. Complications of hysterectomy

   a. HYSTERECTOMY *adverse effects

   b. HYSTERECTOMY *complications

5. Acetate biosynthesis in Mycobacteria

   a. ACETATES *biosynthesis
      MYCOBACTERIUM *biosynthesis

   b. ACETATES *metabolism
      MYCOBACTERIUM *biosynthesis

   c. ACETATES *biosynthesis
      MYCOBACTERIUM *metabolism

6. Nursing in gout

   a. GOUT *nursing

   b. GOUT *nursing
      NURSING

   c. GOUT *nursing
      NURSING CARE

7. Effect of streptomycin on E. coli

   a. STREPTOMYCIN *drug effects
      ESCHERICHIA COLI *drug effects

   b. STREPTOMYCIN *pharmacodynamics
      ESCHERICHIA COLI *drug effects

8. Taxonomy of ticks

   a. TICKS
      CLASSIFICATION

   b. TICKS *classification
      CLASSIFICATION

   c. TICKS *classification

9. Classification of American occupations

   a. OCCUPATIONS *classification

   b. OCCUPATIONS
      CLASSIFICATION

10. Effect of promazine on appetite disorders

   a. PROMAZINE *pharmacodynamics
      APPETITE DISORDERS *drug effects

   b. PROMAZINE *pharmacodynamics
      APPETITE DISORDERS *drug therapy

   c. PROMAZINE *therapeutic use
      APPETITE DISORDERS *drug therapy

11. Agenesis of the skin

   a. SKIN *abnormalities

   b. SKIN DISEASES *congenital

12. Bacillus infections

   a. BACILLUS INFECTIONS

   b. BACILLUS *pathogenicity

   c. BACILLUS
      INFECTION

13. A new technic for determining blood volume

   a. BLOOD VOLUME DETERMINATION

   b. BLOOD VOLUME DETERMINATION *instrumentation

14. Brain serotonin in gout

a. BRAIN CHEMISTRY
SEROTONIN *chemistry
GOUT *metabolism

b. BRAIN CHEMISTRY
SEROTONIN *analysis
GOUT *metabolism

c. BRAIN *analysis
SEROTONIN *analysis
GOUT *analysis

15. Effect of x-ray on E. coli

a. ESCHERICHIA COLI *radiation effects

b. ESCHERICHIA COLI
RADIATION EFFECTS

c. ESCHERICHIA COLI *radiation effects
RADIATION EFFECTS

16. Effect of x-ray on gout

a. GOUT *radiation effects

b. GOUT *radiation effects
RADIATION EFFECTS

c. GOUT *radiotherapy

d. GOUT *radiotherapy
RADIOTHERAPY

17. Maximum safe dose of pargyline in dogs

a. PARGYLINE *toxicity

b. PARGYLINE *poisoning

c. PARGYLINE *adverse effects

18. Blood copper in hemosiderosis

a. COPPER *analysis
BLOOD CHEMICAL ANALYSIS
HEMOSIDEROSIS *blood

b. COPPER *blood
BLOOD CHEMICAL ANALYSIS
HEMOSIDEROSIS *blood

c. COPPER *blood
HEMOSIDEROSIS *blood

19. Influenza morbidity among American school children

a. INFLUENZA
MORBIDITY

b. INFLUENZA *occurrence
MORBIDITY

c. INFLUENZA *occurrence

20. Heart function in normal and tuberculotic women

a. HEART *physiology
TUBERCULOSIS *physiology

b. HEART *physiopathology
TUBERCULOSIS *physiopathology
HEART *physiology

c. HEART *physiopathology
TUBERCULOSIS *physiopathology

21. Urinary corticoids in gout

a. GOUT *urine
ADRENAL CORTEX HORMONES *urine

b. GOUT *urine
ADRENAL CORTEX HORMONES *urine
URINE *analysis

22. Cortisone chemistry

a. CORTISONE *chemistry

b. CORTISONE
CHEMISTRY

c. CORTISONE *analysis

23. Chest x-ray in pulmonary tuberculosis

a. TUBERCULOSIS, PULMONARY
THORACIC RADIOGRAPHY

b. TUBERCULOSIS, PULMONARY *radiography
THORACIC RADIOGRAPHY

c. TUBERCULOSIS, PULMONARY *radiography

24. Kidney function in kidney disease

a. KIDNEY *physiology
KIDNEY DISEASES *physiology

b. KIDNEY *physiology
KIDNEY DISEASES *physiopathology

c. KIDNEY *physiopathology
KIDNEY DISEASES *physiopathology

25. Cardiology in the pharmacy student's curriculum

a. CARDIOLOGY *education
PHARMACY *education

b. CARDIOLOGY *education
EDUCATION, PHARMACY
CURRICULUM

c. CARDIOLOGY *education
EDUCATION, PHARMACY
CURRICULUM

SUBHEADINGS

Exercise II

The concept underlined can be covered by a subheading. Supply after the main headings below the correct subheading.

1. Kidney cytology in nephritis:
   NEPHRITIS *
   KIDNEY *

2. Pancreatic lipase in pancreatitis:
   PANCREATITIS *
   PANCREAS *
   LIPASE *

3. Gastritis in German shepherd dogs:
   GASTRITIS *

4. Use of heat in the treatment of fractures:
   FRACTURES *
   HEAT *

5. Use of ultrasonics in the study of headache:
   ULTRASONICS *

6. Availability of radiologists in Ghana:
   RADIOLOGY *

7. Availability of pharmacists in Ghana:
   PHARMACISTS *

8. Glucose utilization in diabetes:
   DIABETES MELLITUS *
   GLUCOSE *

9. Analysis of German formularies:
   FORMULARIES *

10. The functional role of cortisone:
    CORTISONE *

TOOLS AND REFERENCES

Tools

minimal indispensable aids in the indexing operation, giving primarily specific indexing instructions

Authorities

sources aiding in the indexing operation. Either definitions and explanations in the authority lead to correct indexing or its chapter and section headings themselves lead to MeSH terms

References

sources which do not lead directly to actual headings but which are useful in clarifying information which in turn leads to correct indexing

Dictionaries

self-explanatory: the purpose of any dictionary is to define terms or, in the case of foreign language dictionaries, to give MEDLARS indexers English equivalents

REFERENCES AND TOOLS

In indexing most articles, the Indexer must go beyond the words of the author to another source. For the sake of convenience, we have classified these "other sources" as 1) TOOLS, 2) AUTHORITIES, 3) REFERENCE BOOKS and 4) DICTIONARIES.

You will find complete identifying information below for the sources we recommend as a minimum for satisfactory and accurate indexing. Much of this information is covered in the annual prefaces to MEDICAL SUBJECT HEADINGS and in the section in the MEDLARS INDEXING MANUAL on references and tools. They are listed below by author. The information given is to help the Indexer in ordering texts for his reference collection. Obviously not all texts and authorities will be ordered by each indexer. For example, an indexer doing psychology exclusively will probably not order Bergey, nor will the indexer doing microbiology exclusively order English and English. For anyone working in a given area, however, the sources below under AUTHORITIES are mandatory.

TOOLS

MeSH
Trees
Indexing Manual
Authority File
Technical Notes
List of Provisional Headings

AUTHORITIES

Ainsworth, G. C. and Bisby, G. R. Dictionary of the Fungi. 5th ed. Kew, Commonwealth Mycological Institute, 1961

American Cancer Society. Manual of Tumor Nomanclature and Coding. Corrected ed. New York, 1951

Andrewes, Sir Christopher and Pereira, H. G. Viruses of Vertebrates. 2d ed. Baltimore, Williams & Wilkins Co., 1967

Breed, R. S., Murray, E. G. D. and Smith, N. R. Bergey's Manual of Determinative Bacteriology. 7th ed. Baltimore, Williams & Wilkins Co., 1957

Buchanan, R. E., Holt, J. G. and Lessel, E. F. Jr. Index Bergeyana. Baltimore, Williams & Wilkins Co., 1966

Dorland, W. A. N. Dorland's Ilustrated Medical Dictionary. 24th ed. Philadelphia, W. B. Saunders Co., 1965

Faust, E. C. and Russell, P. F. Craig and Faust's Clinical Parasitology. 7th ed. Philadelphia, Lea and Febiger, 1964

Gray, H. and Goss, C. M. Anatomy of the Human Body. 28th ed. Philadelphia, Lea and Febiger, 1967

International Union of Biochemistry. Standing Committee on Enzymes. Enzyme Nomenclature. Amsterdam, Elsevier Publishing Co., 1965
Jablonski, S. Russian Drug Index. 2d ed. PHS Publication No. 814. Washington, 1967
Kudo, R. Protozoology. 5th ed. Springfield, Charles C Thomas, 1966
Rubin, P. Dynamic Classification of Bone Dysplasias. Chicago, Year Book Medical Publishers Inc., 1964
Ruhl, M. J. and Sokoloff, L. A Thesaurus of Rheumatology. Arthritis and Rheumatism, 8:97-182, February 1965. New York, Grune & Stratton Inc.
Strong, O. S. and Elwyn, A. Human Neuroanatomy. 5th ed. Baltimore, Williams and Wilkins Co., 1964
Wintrobe, M.M. Clinical Hematology. 6th ed. Philadelphia, Lea and Febiger, 1967

REFERENCES

Allen, J.H. May's Manual of the Diseases of the Eye. 23d ed. Baltimore, Williams and Wilkins Co., 1963
Beeson, P. B. and McDermott, W. Cecil-Loeb Textbook of Medicine. 12th ed. Philadelphia, W. B. Saunders Co., 1967
Castiglioni, A. A History of Medicine. 2d ed. New York, Alfred A. Knopf, 1947
Durham, R. H. Encyclopedia of Medical Syndromes. New York, Paul B. Hoeber Inc., 1960
Fairchild, H. P. Dictionary of Sociology and Related Sciences. Philosophical Library, 1944: Totowa, N. J., Littlefield, Adams & Co., 1965
Fédération Dentaire Internationale. A Lexicon of English Dental Terms. The Hague, A. Sijthoff, 1966
Garrison, F. H. An Introduction to the History of Medicine. 4th ed. Philadelphia, W. B. Saunders Co., 1929
Gorlin, R. J. and Pindborg, J. J. Syndromes of the Head and Neck. New York, McGraw-Hill Book Co., 1964
Gould, J. and Kolb, W. L. Dictionary of the Social Sciences. New York, Free Press, 1964
Grinker, R. R. and Sahs, A. L. Neurology. 6th ed. Springfield, Charles C Thomas, 1966
Hinsie, L. E. and Campbell, R. J. Psychiatric Dictionary. 3d ed. New York, Oxford University Press, 1960
Hyman, L. H. The Invertebrates. 1st ed. New York, McGraw-Hill Book Co., 1940-1959. 5v.
Leiber, B. and Olbrich, G. Die Klinischen Syndrome. 4th ed. München, Urban & Schwarzenberg, 1966. 2v.
Merck Index of Chemicals and Drugs; an Encyclopedia for Chemists, Pharmacists, Physicians, and Members of Allied Professions. 7th ed. Rahway, N. J., Merck & Co., Inc., 1960
Nelson, W. E. Textbook of Pediatrics. 8th ed. Philadelphia, W.B. Saunders Co., 1964
Robbins, S. L. Pathology. 3d ed. Philadelphia, W. B. Saunders Co., 1967

Smith, H. A. and Jones, T. C. Veterinary Pathology. 3d ed. Philadelphia, Lea and Febiger, 1966

Stanbury, J. B., Wyngaarden, J. B. and Fredrickson, D. S. The Metabolic Basis of Inherited Disease. 2d ed. New York, McGraw-Hill Book Co., 1966

United States Government Printing Office Style Manual. Rev. ed., January 1967. Washington, U. S. Government Printing Office, 1967

DICTIONARIES

Callaham, L. I. Russian-English Chemical and Polytechnical Dictionary. 2d ed. New York, John Wiley & Sons, 1962

DeVries, L. German-English Technical and Engineering Dictionary. New York, McGraw-Hill Book Co., 1950

Garnier, M. and Delamare, V. Dictionnaire des Termes Techniques de Médecine. 18th ed. Paris, Librairie Maloine S. A., 1967

Jablonski, S. Russian-English Medical Dictionary. New York, Academic Press, 1958

Mansion, J. E. Heath's Standard French and English Dictionary. Part I: French-English. Boston, D. C. Heath, 1962

Veillon, E. Medizinisches Wörterbuch - Medical Dictionary - Dictionnaire Médical. Bern, Verlag Hans Huber, 1950

Webster's Seventh New Collegiate Dictionary. Springfield, Mass., G. & C. Merriam Co., 1967

INDEXING MANUAL

I. Purpose

II. General plan

III. Indexing theory

IV. Medical Subject Headings (MeSH)

V. Descriptive indexing

VI. Check Tags

VII. Subheadings

VIII. Indexing principles by category

IX. Enzyme Key

X. Geographical list

XI. Index

ANALYSIS OF MeSH SUBCATEGORIES

Each of the MeSH subcategories will be examined to see its coverage and to learn major indexing principles governing the approach to the specific subcategory.

These lectures on the MeSH subcategories can touch only lightly on the boundless implications of the headings and their use. The lectures can never be complete and can offer only a glimpse of what will confront the MEDLARS analyst after the training period.

Below is an outline of subjects to be discussed in each subcategory. Other subjects will be discussed as they arise as a result of questions from the class.

A1 Distinction between EXTREMITIES for humans and animals

A2 Distinction between bones and joints
Distinction between BONE AND BONES and SKELETON
Coverage of bones; joints; muscles

A3 MeSH coverage of GASTROINTESTINAL SYSTEM
Breakdown of BILE DUCTS; INTESTINES; TOOTH

A4 PARANASAL SINUSES for "sinuses" or "nasal sinuses"

A5 Definition of UROGENITAL SYSTEM and rationale
Breakdown of KIDNEY; GONADS
Distinction between FALLOPIAN TUBES and OVIDUCTS

A6 Definition of ADRENAL GLANDS as adrenal cortex
Definition of PITUITARY GLAND as anterior pituitary
Avoidance of ENDOCRINE DISEASES as too general

A7 Coverage of arteries and veins
Relation to *blood supply
Distinction between HEART and MYOCARDIUM

A8 Coverage of NERVOUS SYSTEM, AUTONOMIC NERVOUS SYSTEM and CENTRAL NERVOUS SYSTEM
Relation to *innervation
Treeing of neurology terms (see brochure entitled NEUROLOGY HEADINGS)

A9 Breakdown of EYE; EAR

A10 Distinction between EMBRYO and *embryology
Indexing policy on membranes

A11 Prohibition of BONE MARROW *cytology and CONNECTIVE TISSUE *cytology
Breakdown of CHROMOSOMES and indexing policy
Restriction of subheadings *anatomy & histology, *cytology, *pathology (Indexing Manual 14.24)

A12 Subheading restrictions (Indexing Manual 14.26)

A13 Breakdown of STOMACH
Distinction between EXTREMITIES and limbs; MAMMAE and BREAST; OVIDUCTS and FALLOPIAN TUBES
Definition of MILK
WOOL as a textile

B1 Breakdown of INVERTEBRATES; NEMATODA and TREMATODA; PROTOZOA; INSECTS

B2 General animal terms and their restrictions
Breakdown of MAMMALS
List of APES and MONKEYS (Indexing Manual 15.16)

B3 Relation to Bergey's Manual of Determinative Bacteriology
Breakdown of ENTEROBACTERIACEAE; MYCOBACTERIUM; SALMONELLA
Distinction between Bacillus and bacillus

B4 Classification of viruses
Genus vs common name
Relation to Andrewes' Viruses of Vertebrates

B5 Classification of fungi
Breakdown of PLANTS
Catalog Section terms
Relation to Ainsworth's Dictionary of the Fungi

C1 Indexing instructions for infections when the specific organism is in MeSH; is not in MeSH
Breakdown of PARASITIC DISEASES; STAPH(YLOCOCCAL) INFECTIONS; STREPTOCOCCAL INFECTIONS; TINEA; TUBERCULOSIS
Synonyms for common diseases (see Indexing Manual 15.10)

C2 Definition of "neoplasms"
Indexing policy: mandatory coverage by organ/neoplasm pre-coordinate, by histological type, by specific site
Mandatory use of Tumor Manual (see p. 75a)

C3 Breakdown of BONE DISEASES; MUSCULAR DISEASES; RHEUMATISM; ARTHRITIS, RHEUMATOID; JOINT DISEASES

C4 Distinction between GASTROINTESTINAL DISEASES and STOMACH DISEASES/INTESTINAL DISEASES
Coverage of tooth diseases

C5 Distinction between RESPIRATORY TRACT DISEASES and LUNG DISEASES
Breakdown of RESPIRATORY TRACT DISEASES; LUNG DISEASES
Definition of ASTHMA as "bronchial asthma"; PNEUMONIA as "pneumonitis"; PLEURISY as "pleuritis"

C6 Definition of UROLOGIC DISEASES as "urinary tract diseases"
Definition of various abortion terms and restricted use of subheadings
Breakdown of KIDNEY DISEASES; PREGNANCY COMPL.(ICATIONS)

TUMOR MANUAL

Exercise

Review the INDEX MEDICUS policy on indexing neoplasms as given in class and as given in the Indexing Manual, 17.4-17.8.

Using the Tumor Manual (Manual of Tumor Nomenclature & Coding of the American Cancer Society), index the following neoplasms:

1. androblastoma
2. malignant androblastoma
3. fibroblastic osteosarcoma of the femur
4. astroglioma of the frontal lobe
5. uterine fibroma
6. transitional cell carcinoma of the bladder
7. hepatoma
8. giant cell carcinoma of the forearm
9. epidermoid carcinoma in situ of the cervix
10. oat cell carcinoma of the lung

Comparison of GENITAL DISEASES, MALE and GYNECOLOGIC DISEASES
Definition of PROSTATIC HYPERTROPHY as "prostate adenoma"

C7 Avoidance of ENDOCRINE DISEASES as too general
Breakdown of DIABETES MELLITUS
ADRENAL GLAND DISEASES as adrenal cortex diseases

C8 Distinction between CARDIOVASCULAR DISEASES and HEART DISEASES/VASCULAR DISEASES
Breakdown of HEART DISEASES
Breakdown of CEREBROVASCULAR DISORDERS

C9 Breakdown of ANEMIA; ANEMIA, HEMOLYTIC CONGENITAL
Explanation of absence of leukemia from this subcategory
Breakdown of BLOOD PLATELET DISORDERS
Breakdown of BLOOD COAGULATION DISORDERS and coordination with blood factors of Subcategory D7
Definition of HEMORRHAGIC DIATHESIS and its breakdown

C10 Breakdown of NERVOUS SYSTEM DISEASES as with its correlates in Subcategory A8
Breakdown of BRAIN DISEASES; CEREBROVASCULAR DISORDERS; ENCEPHALITIS; EPILEPSY; MENINGITIS; MOVEMENT DISORDERS
Indexing policy on NEUROLOGIC MANIFESTATIONS

C11 Definition of HEARING DISORDERS, DEAFNESS and ACOUSTIC TRAUMA
Specificity of otitis
Indexing policy on EYE MANIFESTATIONS

C12 Definition and breakdown of SKIN APPENDAGE DISEASES
Breakdown of DERMATITIS; PIGMENTATION DISORDERS; SKIN DISEASES, INFECTIOUS; TINEA

C13 Indexing policy on METABOLISM, INBORN ERRORS and its indentions
Indexing of vitamin deficiencies
Breakdown of DIABETES MELLITUS

C14 Breakdown of WOUNDS AND INJURIES; relation to *injuries
Breakdown of FRACTURES
BRAIN INJURY, ACUTE versus BRAIN *injuries
POISONING and relation to *poisoning
Inclusion of SKULL FRACTURES and FACIAL INJURIES by indexer under HEAD INJURIES
HYPERSENSITIVITY as "allergy"
AUTOIMMUNE DISEASES as "autoimmunity"

C15 Indexing of diseases exclusively of animals; not exclusively of animals
Definition of ZOONOSES
Relation to *veterinary

C16 Definition and breakdown of ABNORMALITIES
Indexing policy on INFANT, NEWBORN, DISEASES and relation to check tag INFANT, NEWBORN
Distinction between CHROMOSOME ABNORMALITIES and CHROMOSOME ABERRATIONS (G1)
Breakdown of HEART DEFECTS, CONGENITAL

C17 Definition of "sign", "symptom", "disease", "manifestation"
Indexing policy on "general pathological processes" (Indexing Manual 16.15)
Notation of C17 terms to be NIM
Breakdown of CEREBRAL HEMORRHAGE; HEMORRHAGE
Breakdown of COLLAGEN DISEASES
Indexing policy on PAIN
Definition and breakdown of SHOCK
Indexing of FISTULA (See p. 78)

D1 Breakdowns of popularly encountered elements
Grouping of specific radioisotopes and indexing policy (See p. 79)

D2 Note breakdowns

D3 Definition of "function groups" or "action groups"
Breakdown of PESTICIDES and the specific pesticide groups
Breakdown of ANTI-INFECTIVE AGENTS and its specific groups

FISTULA

▵ The following fistulae have been pre-coordinated for you in MeSH:

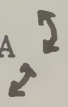
BILIARY FISTULA
BLADDER FISTULA
  Vesicovaginal Fistula
BRONCHIAL FISTULA
ESOPHAGEAL FISTULA
  Tracheoesophageal Fistula
GASTRIC FISTULA
INTESTINAL FISTULA
  Fissure in Ano
  Rectal Fistula
OROANTRAL FISTULA
PANCREATIC FISTULA
RECTAL FISTULA
  Rectovaginal Fistula
RECTOVAGINAL FISTULA
SALIVARY GLAND FISTULA
TRACHEOESOPHAGEAL FISTULA
URINARY FISTULA
  Bladder Fistula
VAGINAL FISTULA
  Rectovaginal Fistula
  Vesicovaginal Fistula
VESICOVAGINAL FISTULA

▵ Sample indexing: Gastrojejunocolic fistula

Principle: Cover each element from the viewpoint of the anatomical site and the fistula, making each IM.

gastro + jejuno + colic + fistula

X GASTRIC FISTULA
X COLONIC DISEASES
X INTESTINAL FISTULA
X JEJUNUM



The arrows indicate the coordinations.

▵ Exercise: Index cholecystoduodenal fistula; vesicovaginorectal fistula; esophagotracheal fistula; renopulmonary fistula; uterine fistula

▵ The Indexing Manual gives a very complete coverage of the indexing of fistulae in 16.28.1

RADIOISOTOPES

△ The following naturally occurring elements are always radioactive. The names are followed by their symbols.

actinium	Ac	polonium	Po
americium	Am	promethium	Pm
astatine	At	protactinium	Pa
berkelium	Bk	radium	Ra
californium	Cf	radon	Rn
curium	Cm	technetium	Tc
deuterium	D	thorium	Th
francium	Fr	tritium	T
neptunium	Np	uranium	U
plutonium	Pu		

Index the naturally radioactive elements under the name of the radioactive element only; do NOT index in addition under the heading RADIOISOTOPES.

△ The following main headings are non-radioactive elements for which the isotopic forms have been pre-coordinated for you by MeSH:

CALCIUM ISOTOPES	MERCURY ISOTOPES
CARBON ISOTOPES	OXYGEN ISOTOPES
CERIUM ISOTOPES	PHOSPHORUS ISOTOPES
CESIUM ISOTOPES	POTASSIUM ISOTOPES
CHROMIUM ISOTOPES	SODIUM ISOTOPES
COBALT ISOTOPES	STRONTIUM ISOTOPES
GOLD ISOTOPES *	SULFUR ISOTOPES
IODINE ISOTOPES *	YTTRIUM ISOTOPES
IRON ISOTOPES	ZINC ISOTOPES

*see MeSH for specifics also

Breakdown of PENICILLIN; SULFONAMIDES

D4 Synonyms for "antineoplastic agents" as seen under ANTINEOPLASTIC AGENTS in the MeSH alphabetized list
Breakdown of ANTINEOPLASTIC AGENTS
Breakdown of IMMUNOSUPPRESSIVE AGENTS

D5 Breakdown of AUTONOMIC DRUGS
Synonyms in the MeSH alphabetized list for "adrenergic" and "cholinergic" entries
Distinction between DIGITALIS (B6) and DIGITALIS GLYCOSIDES

D6 Breakdown of ANESTHETICS
Breakdown of BARBITURATES
Breakdown of TRANQUILIZING AGENTS
RAUWOLFIA as plant and alkaloid
ETHYL ETHER as "ether"

D7 Breakdown of ANTICOAGULANTS and DIURETICS
Breakdown of BLOOD COAGULATION FACTORS
Indexing policy on factor deficiencies and MeSH factor cross-references in the alphabetical list
FIBRINOGEN as Factor I, PROTHROMBIN as Factor II, THROMBOPLASTIN as Factor III, CALCIUM as Factor IV (see brochure entitled Blood Factors)
Definition of GASTROINTESTINAL AGENTS and its breakdown

D8 Use of HORMONES and avoidance as too general
Indexing policy on HORMONES and SEX HORMONES
Indexing policy on ADRENAL CORTEX HORMONES
Breakdown of large hormone groups

D9 Indexing policy on enzymes and use of KEY TO THE INDEXING OF ENZYMES in the Indexing Manual
Coverage of enzymes
Indexing instructions on enzyme precursors

D10 Breakdown of NUCLEIC ACIDS, PROTEINS and AMINO ACIDS
Avoidance of terms GLOBULINS and ALBUMINS and likely use of SERUM GLOBULIN and SERUM ALBUMIN

Breakdown of SERUM ALBUMIN and SERUM GLOBULIN
Breakdown of GAMMA GLOBULIN
Breakdown of RNA and DNA

D11 CARBOHYDRATES as "sugar"
GLUCOSE *blood as an invalid combination, indexed instead as BLOOD SUGAR
Breakdown of CARBOHYDRATES
Definition of FATS and LIPIDS
Dietary terms
Vitamin coverage and correlation with vitamin name given as cross-references in MeSH

D12 Definition of BIOLOGICAL PRODUCTS
Breakdown and indexing policy on VACCINES
Breakdown of ANTIGENS and ANTIBODIES
Distinction between tetanus antitoxin and toxoid

D13 Coverage of miscellaneous MeSH terms not naturally falling into other D subcategories
Breakdown of DOSAGE FORMS and consideration of all INJECTIONS terms from Category E
Coverage of frequently met concepts such as CONTRAST MEDIA, CARCINOGENS, radioprotective and radiosensitizing agents, DYES, SOLVENTS
Use of these miscellaneous terms as NIM coordinates
Definition of DRUGS and its use in indexing with subheading restrictions (Indexing Manual 18.22)

E1 Breakdown of DIAGNOSIS, RADIOGRAPHY, ELECTRODIAGNOSIS, ENDOSCOPY
Diagnostic subcategory as IM or NIM (See p. 82)
Indexing policy on DIAGNOSIS, LABORATORY and DIAGNOSIS, DIFFERENTIAL
Relation to subheading *diagnosis

E2 Inclusion of questionable terms in this "therapeutic" technic subcategory such as NUMISMATICS, PHILATELY, SPORTS, NUDISM, CAMPING, etc.
Breakdown of INJECTIONS and relation to DOSAGE FORMS in Subcategory D13
Distinction between CONTRACEPTIVE DEVICES and CONTRACEPTIVE AGENTS
Coverage of RADIOTHERAPY and relation to *radiotherapy

TECHNICS: PRINT or NON-PRINT?

In MEDLARS indexers routinely index technics used by the author in performing his studies. Each technic is accounted for by an indexer but the problem remains as to whether he will print the technic in INDEX MEDICUS or merely store the technic in the computer. The presentation below should help to clarify policy in this area.

△ Epilepsy: review and case report

In this hypothetical article, the EEG is merely one aspect of many facets described by the author: etiology, clinical manifestations, diagnosis, physiopathology, etc. Index:

EPILEPSY (IM)
ELECTROENCEPHALOGRAPHY (NIM)

△ Epilepsy diagnosis

In this hypothetical article the author discusses several ways of diagnosing epilepsy, of which EEG was one. Index:

EPILEPSY *diagnosis (IM)
ELECTROENCEPHALOGRAPHY (NIM)

△ EEG in epilepsy

In this hypothetical article, the aim of the author was the taking of the EEG and his presenting a discussion of EEG readings. Although EEG is fairly routine in epilepsy diagnosis, the POINT of the article was the EEG. Index:

EPILEPSY (IM)
ELECTROENCEPHALOGRAPHY (IM)

E3 Coverage of anesthetic procedures
ANESTHESIA, CONDUCTION as "nerve block"
PREANESTHETIC MEDICATION as "premedication"
Definition of HIBERNATION, ARTIFICAL

E4 Distinction between SURGERY and SURGERY, OPERATIVE
Relation to *surgery
Distinction between HYPERTENSION *surgery to treat hypertension and HYPERTENSION coordinated with SURGERY, OPERATIVE for articles on the risk of surgery in hypertensive subjects
Breakdown of SURGERY, OPERATIVE
Definition of -ectomy
Indexing policy on -ectomies as surgical procedures or as controls in function studies
Definition of NEUROSURGERY as a field and application in indexing
Definition of DELIVERY as relative to the infant or obstetrician but not the mother
Indexing policy on TRANSPLANTATION breakdowns as NIM and relation to *transplantation
Indexing policy on VASCULAR SURGERY

E5 Absence of several technics from this subcategory, found in Category H
Indexing policy on MICROSCOPY
Indexing policy on EPIDEMIOLOGIC METHODS
Distinction between CEPHALOMETRY (living person) and CRANIOMETRY (the dead)
Relation of EQUIPMENT AND SUPPLIES to *instrumentation
Relation of AUTOPSY and DISSECTION to *pathology
BIOPSY as NIM and relation to *pathology
PHOTOMICROGRAPHY as microfilming and microphotography
Definition of HUMAN EXPERIMENTATION

E6 Coverage of the dental specialties and definitions

F1 Coverage of normal psychological mechanisms and thought processes
Subheading limitations
Breakdown of EMOTIONS, BEHAVIOR, LEARNING, PERCEPTION, COGNITION, SENSATION
Psychology disciplines as fields or as coordinates
Omission of (PSYCHOLOGY) on Data Forms
Terms of interest in animal psychology
PSYCHOLOGY and PSYCHOPHYSIOLOGY as NIM concepts

F2 Coverage of disordered psychological mechanisms and mental disorders
Subheading limitations
Breakdown of MENTAL RETARDATION, NEUROSES, PSYCHOSES, SCHIZOPHRENIA

F3 Coverage of various specialties and diagnostic and therapeutic technics used in psychology and psychiatry
Subheading limitations
Breakdown of PSYCHOTHERAPY
Breakdown of PSYCHOANALYSIS

G1 Coverage of specialties and all subjects studied in premedical school
Coverage of physiological processes
Subheading limitations
Distinction between -OLOGIES as referring to the field and practitioner and the organ or disease as referring to the patient
Disciplines as IM terms
Definition and use of NEUROPHYSIOLOGY
Distinction between VISION and VISUAL PERCEPTION, HEARING and AUDITORY PERCEPTION
Distinction between EMBRYOLOGY and *embryology; between EMBRYOLOGY and EMBRYO
Distinction among IMMUNOLOGY, IMMUNITY and IMMUNIZATION
Indexing policy on genetics
Distinctions among the various sex terms here and in the MeSH alphabetized list

G2 Coverage of specialties
Breakdown of MEDICINE and indexing policy on the indentions

G3 Subheading restrictions on *analysis and *prevention & control
Distinction between HEAT and HEATING, LIGHT and LIGHTING
Breakdown of COMMUNICABLE DISEASE CONTROL
Specificity of SEALED CABIN ECOLOGY by coordinates

H Absence from this category of some technics found in E5
Chemistry disciplines as fields or coordinates
Indexing policy on RADIATION
Distinction between MOTION and MOVEMENT; MOVEMENT and LOCOMOTION; LOCOMOTION and GAIT
Coverage and breakdown of models
Coverage and breakdown of TEMPERATURE
Definition and use of RESEARCH

I Distinction between RACIAL STOCKS and ETHNIC GROUPS and indexing policy
Definition of CRIMINOLOGY and CRIME
Breakdown of EDUCATION and indexing policy
Distinction between FORENSIC MEDICINE and JURISPRUDENCE
Breakdown of POPULATION
Definition of GOVERNMENT
Sociological concepts as NIM coordinates

J Motley coverage
Subheading restrictions
Breakdown of FOOD
Definition of SHELLFISH
Occupations as pertinent to the occupation and also the worker

K
- Breakdown and indexing policy on HISTORY OF MEDICINE
- Precoordination of MEDICINE terms
- Breakdown of RELIGION and precoordination of RELIGION terms
- Definition and use of HISTORY and HISTORIOGRAPHY
- Definition and use BIOGRAPHY and AUTOBIOGRAPHY

L
- Coverage as applicable to Catalog Section
- Indexing policy on BIBLIOGRAPHY; DIRECTORIES; DICTIONARIES; NOMENCLATURE; BOOKS
- Breakdown of COMMUNICATION
- Definition of BOOKWORM

M
- Coverage as named groups of persons
- Subheading limitations
- Age groups as IM terms
- Definition and use of WOMEN
- Definition and use of PATIENTS

N1
- Coverage as the type of people who use medical care
- Breakdown of VITAL STATISTICS and DEMOGRAPHY
- Breakdown of SOCIOECONOMIC FACTORS and use as NIM coordinate
- Indexing policy on HEALTH
- SEX FACTORS as IM and NIM

N2
- Coverage as the types of medical care services and of the people who give them
- Breakdown of HEALTH MANPOWER, PERSONAL HEALTH SERVICES, HEALTH FACILITIES
- Educational coverage in this subcategory
- Use of *manpower and *supply & distribution with various terms

N3
- Coverage as the manner of society's involvement in the dispensing of medical care
- Breakdown of GOVERNMENT AGENCIES
- Breakdown of ECONOMICS, ORGANIZATIONS, INSURANCE
- Breakdown of SOCIETIES and indexing policy
- Distinction between LEGISLATION and JURISPRUDENCE

N4 Coverage as the types of administration and organization in the process of providing medical care

Breakdown of PROFESSIONAL PRACTICE

Breakdown of PROFESSIONAL-PATIENT RELATIONS

Breakdown of ORGANIZATION AND ADMINISTRATION

INDEXING PHILOSOPHY

The rules governing indexing policy are numerous and intricate and highly detailed. The basic indexing philosophy, however, is as neat and simple as the rules are myriad.

- An Indexer is only an indexer: he is not a physician, not a research scientist, not an author; an Indexer reports: he does not evaluate, he does not diagnose, he does not perform operations.

- An Indexer who does not understand the point of an article within 10 minutes will not index it any better after 30 or 40 minutes.

- An Indexer will learn as much about antigens for indexing purposes by indexing 40 articles on antigens as by spending 15 hours of indexing time reading about antigens.

- The article in hand is the world's best authority on that article. An accurate Indexer is the world's second best authority.

- An Indexer will provide, in general, for every clinical article to be indexed an organ, a disease affecting that organ, a cause of the disease and a treatment for it.

- An Indexer will always provide, if possible, the technic mentioned in the article whereby the subject was studied or the research or therapy was performed.

- An Indexer will always distinguish between an -ology and an organ or disease: the -ology is always the physician; the organ or disease is always the patient. They are never confused.

- An Indexer will describe the concepts or contents of any article only within the confines of MeSH.

- An Indexer will always index toward the most specific heading possible: an article on the lung is indexed as LUNG and not as RESPIRATORY TRACT.

- An Indexer can completely describe any article by a single MeSH term or by a coordination of MeSH terms:
  - by a single term: LIVER
  - by a pre-coordinated term: LIVER DISEASES (i.e., enough articles have appeared in the literature on diseases of the liver historically under LIVER to justify creating a new, pre-coordinated term LIVER DISEASES)
  - by a coordination of a main heading with a subheading: LIVER *metabolism
  - by a coordination of a main heading with a check tag: LIVER + INFANT, NEWBORN
  - by a coordination of two main headings: AVOIDANCE LEARNING (and) RADIATION EFFECTS

INDEXING SECTION, BSD
INDIVIDUAL MONTHLY STATISTICS

Date _____ Name _____

	INDEXING						REVISION							
Day	Arts Depth	Arts N-D	Total Arts	Hours	J D	J N-D	Arts Depth	Arts N-D	Total Arts	Hours	J D	J N-D	Other	Total Hours

PRACTICE TITLES

Each of the titles below was either taken from published issues of INDEX MEDICUS or contrived to generate discussion in class on indexing policy.

Index each of the titles on the practice title exercises on a separate Data Form. Assume that the title truly reflects the content of the article and that the article appeared in a Depth Journal. Use as many main headings and subheadings as you feel are needed and be careful to indicate the required Check Tags, Geographic Headings, Provisionals, etc.

1. Urinary pyridoxine and urinary sodium in infantile myoclonic seizures.
2. Peptic ulcer causing agranulocytosis
3. Cerebellar biopsy in periarteritis nodosa
4. Histochemistry of experimental cerebral edema in rats
5. EEG discharges in acute cerebral arteriosclerosis
6. Electron microscopic observations on normal human pancreatic arteries
7. ACTH-induced psychoses in the light of daily 17-hydroxycorticosteroid excretion under high ACTH dosage
8. The effect of illumination and d-amphetamine on the activity of rhesus monkeys
9. Learning and set formation by normal and previously irradiated female rats
10. Chromatographic studies on tryptophan metabolism (via kynurenine) in schizophrenic patients hospitalized in Sweden
11. Urinary excretion of adrenaline, noradrenaline and other catecholamines in mental illness
12. Indications for subtotal and total hysterectomy at the Rotunda Hospital in Dublin
13. Blood serotonin in pregnancy
14. Blood serotonin in pregnancy complications
15. Plasma serotonin in measles in pregnancy
16. Serum serotonin in normal and pathologic pregnancies
17. Effect of hydrocortisone on plasma enzymes in the rat
18. Effect of hydrocortisone on erythrocyte enzymes in the rat
19. The diagnosis of gout
20. X-ray diagnosis of gout
21. The differential diagnosis of gout

22. Gout simulating osteoarthritis
23. Osteoarthritis simulating gout
24. Hyperthyroidism, thyroid adenoma and other thyroid diseases
25. Thyroid abnormalities
26. Agenesis of the thyroid
27. Eye manifestations in arthritis
28. Conjunctivitis in arthritis
29. Eye diseases in arthritis
30. Streptococcal conjunctivitis in arthritis
31. Measles causing blindness
32. Chlorpromazine causing agranulocytosis in children
33. Serum serotonin in normal and complicated pregnancy in hypophysectomized dogs
34. Cardiac metabolism of copper in myocardial infarct; its correlation with myocardial function. Comparative study of young adults and middle-aged persons
35. Effect of three types of feedback on concept formation in chronic schizophrenics

PRACTICE TITLES

Exercise II

1. Drive, reinforcement and personality
2. Sex differences in attitudes toward leaders' display of authoritarian behavior
3. An approach to measuring psychological tensions by means of dream associations
4. A case of hydatid cyst of the lung and pancreas in a 2-year-old child
5. Neurochemical correlates of behavior. III. Norepinephrine and dopamine in four parts of the brain of the pigeon during periods of atypical behavior following injection of 5-hydroxytryptophan
6. An unusual case of Filaria oculi humani infection associated with Sporozoa infection
7. Synthesis of an unidentified antibiotic substance by a streptomycete (Streptomyces africanus)
8. Duodeno-pancreatic injuries in children following blunt and penetrating trauma
9. Standardization of phonocardiographic terminology
10. Directory of the Ophthalmological Society of Australia
11. The influence of emotional factors on adrenal cortex function
12. HCl secretion and intestinal peristalsis after partial resection of the stomach in bleeding ulcer of the fundus in middle-aged personnel managers
13. Sex chromatin in Turner's syndrome
14. Amantadine therapy of influenza A and other respiratory viral diseases in Finnish soldiers
15. Free amino acids on human fingers: the problem of contamination in chromatography
16. Properties of ribonucleic acid isolated from alfalfa mosaic virus
17. Comparative response of the guinea pig and rabbit myocardium to isonicotinic acid hydrazide
18. Electron microscopy of cortisone-producing cells in the rat adrenal; radiocarbon studies
19. Historical note on a 19th century case report of pancreatic cystic fibrosis
20. Radiorenography in nephritis

PRACTICE TITLES

Exercise III

1. Sclerosis of the lungs, bile ducts and adrenal medulla
2. Changes in liver function and morphology in chronic recurrent pancreatitis
3. Changes in phosphorus compounds in the rat diaphragm; study based on P32-labelled phosphates
4. The suicide of Marilyn Monroe: a reconstructed psychodynamic study
5. Drinking and smoking habits of New York Jews, Negroes and Puerto Ricans; an epidemiological and psychological comparison
6. Follow-up study of a case of therapy with thyroid antagonists in heart disease in a 3-year-old boy
7. Who is there to be the dermatologist of the Lunar Age?
8. How can nursing care be measured in hospitals for chronic disease?
9. The physiology of auditory perception
10. Thin-layer chromatography of bile acids
11. Party-switching and authoritarianism in the 1968 elections
12. Pancreas morphology in pancreatic disease
13. Studies on the perfused rat liver. VIII. The effect of glucagon and insulin on glucose metabolism and gluconeogenesis in the liver in the presence of bicarbonates
14. Biopsy of the gastric mucosa in postoperative gastritis caused by methyl alcohol intoxication
15. Effect of excision of the adrenal medulla on fracture healing in rats; a follow-up study

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